

## UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS WELL LOG ELECTRIC LOGS FILE ☒ WATER SANDS LOCATION INSPECTED oil SUB REPORT abd

Location abandoned - well never drilled - 9-21-82

DATE FILED 7-14-81

LAND FEE &amp; PATENTED

STATE LEASE NO

PUBLIC LEASE NO

U-33916

INDIAN

DRILLING APPROVED 11-25-81

SPUDDED IN

COMPLETED

PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR

PRODUCING ZONES:

TOTAL DEPTH

WELL ELEVATION:

DATE ABANDONED LA 9-21-82

FIELD WILDCAT 3/86

UNIT

COUNTY: GARFIELD

WELL NO FEDERAL B#1

API NO. 43-017-30111

LOCATION 1980

FT FROM (N) ☒ LINE.

1979

FT FROM (E) ☒ LINE.

SW NE

1 4 - 1 4 SEC 15

TWP

RGE

SEC

OPERATOR

TWP

RGE

SEC

OPERATOR

35S

1E

15

CITIES SERVICES

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK						7. UNIT AGREEMENT NAME	
DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>							
b. TYPE OF WELL						8. FARM OR LEASE NAME	
OIL WELL <input checked="" type="checkbox"/>		GAS WELL <input type="checkbox"/>		SINGLE ZONE <input type="checkbox"/>	MULTIPLE ZONE <input type="checkbox"/>	Federal B	
OTHER _____						9. WELL NO.	
2. NAME OF OPERATOR						1	
CITIES SERVICE COMPANY						10. FIELD AND POOL, OR WILDCAT	
3. ADDRESS OF OPERATOR						Wildcat	
P. O. Box 1919 Midland, Texas 79702						11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)						Sec. 15-T35S-R1E	
At surface 1980' FNL & 1979 FEL of Sec. 15-T35S-R1E, Garfield County Utah						12. COUNTY OR PARISH   13. STATE	
At proposed prod. zone SWNE						Garfield   Utah	
Same as above							
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*							
Approx. 11 miles west of Escalante, Utah							
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)				16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL		
660'				2219.14	80		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.				19. PROPOSED DEPTH	20. ROTARY OR CABLE TOOLS		
N/A				10,195' Redwall	Rotary		
21. ELEVATIONS (Show whether DF, RT, GR, etc.)						22. APPROX. DATE WORK WILL START*	
7253.4' GR						After Permit Approval	
23. PROPOSED CASING AND CEMENTING PROGRAM							

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	94#	40'	3 yds.Redimix
17-1/2"	10-3/4"	40.5 & 45.5#	3000'	2750 sacks
9-1/2"	7-5/8"	26.4#	7200'	850 sacks
6-1/2"	5-1/2" liner	17#	6900-10,195'	200 sacks

It is proposed to drill this well to a depth of 10,195' to test the Redwall Formation. The blowout prevention program is as follows:

1. one set of blind rams
2. one set of drill pipe rams
3. one Hydril
4. one rotating head.

The acreage allocated to this well is not dedicated to any gas purchaser.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

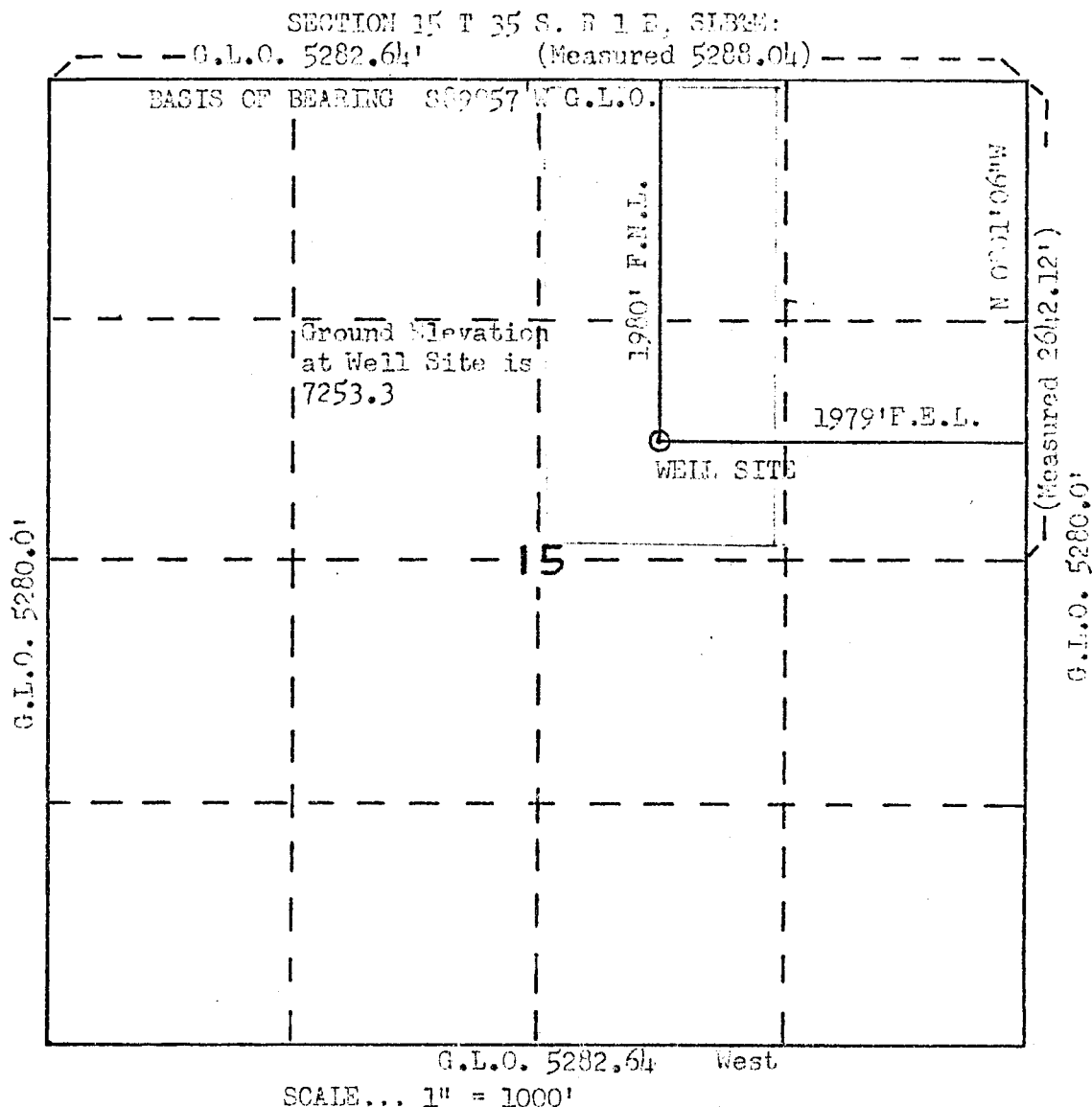
24. SIGNED E. J. Pilder TITLE Reg. Oper. Mgr.-Prod. DATE 7-14-81  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_  
OF UTAH DIVISION OF \_\_\_\_\_

**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**  
**DATE: \_\_\_\_\_**  
**BY: \_\_\_\_\_**

## Location and Elevation Plat



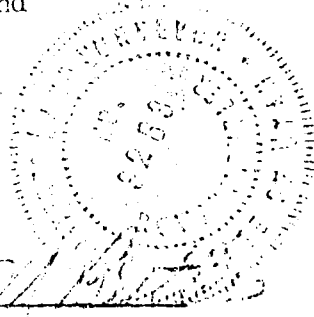
ALLENS ENGINEERING OF RICHFIELD, UTAH  
has in accordance with a request from ED WILDER  
for CITIES SERVICE COMPANY OF MIDLAND, TEXAS  
determined the location of Federal B # 1  
to be 1979' F.E.L. and 1980' F.N.L. of section 15  
Township 35 So. Range 1 East of Salt Lake Base and  
Meridian Garfield County, Utah.

I hereby certify that this plat is an  
accurate representation of a correct  
survey showing the location of  
CITIES SERVICE CO. Federal B # 1.

Date

6/26/81

*Robert W. [Signature]*  
State of Utah Licensed Land Surveyor  
No. 3263.



United States Department of the Interior  
Geological Survey  
Oil and Gas Operations  
2000 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

## NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATIONOperator/Project Name Cities Service CompanyProject Type Oil WellProject Location 1980' FNL & 1979' FEL, Section 15, T. 35S., R. 1E.Date Project Submitted July 20, 1981FIELD INSPECTIONDate July 1, 1981Field Inspection  
ParticipantsGeorge Diwachak USGSDave Dallison USFSElmer Startz Cities Service Co.Lincoln Lyman Lyman Construction Co.

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

8/14/81

Date Prepared

George J. Diwachak  
Environmental Scientist

I concur

AUG 14 1981

Date

W. P. Martin FOR  
District Supervisor  
E. W. GUYNN  
DISTRICT ENGINEER

# CATEGORICAL EXCLUSION REVIEW INFORMATION SOURCE

Criteria 516 DM 2.3.A	Federal/State Agency			Local and private corres- pondence (date)	Previous NEPA	Other studies and reports	Staff expertise	Onsite inspection (date)	Other
	Corre- spondence (date)	Phone check (date)	Meeting (date)						
1. Public health and safety	1 (7-13-81)				9, 10	2	6	6 (7-1-81)	4
2. Unique charac- teristics	1				9, 10	2	6	6	4, 8
3. Environmentally controversial	1				9, 10		6	6	4, 8
4. Uncertain and unknown risks	1				9, 10	2	6	6	4, 8
5. Establishes precedents	1				9, 10		6	6	4
6. Cumulatively significant	1				9, 10		6	6	4
7. National Register historic places	1								4
8. Endangered/ threatened species					9				
9. Violate Federal, State, local, tribal law	1				9, 10		6	6	4

PLEASE REFER TO ATTACHED  
REFERENCE LEGEND

## CATEGORICAL EXCLUSION REVIEW COMMON REFERENCE LEGEND

1. Surface Management Agency Input
2. Reviews Reports, or information received from Geological Survey (Conservation Division, Geological Division, Water Resource Division, Topographic Division)
3. Lease Stipulations/Terms
4. Application Permit to Drill
5. Operator Correspondence
6. Field Observation
7. Private Rehabilitation Agreement
8. Recommended Stipulations
9. Environmental Assessment No. 390-80 for Cities Service Company Well No. 1, Section 27, T. 35S., R. 1E., U-33917
10. Environmental Assessment No. 540-81 for Cities Service Company Well No. 1, Section 15, T. 35S., R. 1E., U-33916

#### RECOMMENDED STIPULATIONS

1. All mitigative measures presented in the APD, incorporating recommendations of USFS I.D. Team Reports must be adhered to.
2. Construction activities will be coordinated with the USFS, Escalante District Forest Ranger.
3. The reserve pit will be keyseated with dikes compacted in lifts to prevent seepage or failure.
4. If fractured rock materials are encountered during excavation, the reserve pit will be lined with an impervious material.
5. Logs will be run behind the surface casing to identify potential coal in the Smokey Hollow Member of the Straight Cliffs Formation.
6. All necessary USFS permits must be obtained prior to commencing construction.

Oil and Gas Drilling

EA No. 540-81

United States Department of the Interior  
Geological Survey  
2000 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

August , 1981

ENVIRONMENTAL ASSESSMENT

for

Application for Permit to Drill

Cities Service Company

Well No. 1

Section 15, T. 35S., R. 1E., SLB & M

Garfield County, Utah

Federal Lease U-33916

Prepared by

George Diwachak  
Environmental Scientist  
Salt Lake City, Utah

Noted - G. Diwachak



## Introduction

The following participated in an pre-drill onsite inspection of the proposed well and access road:

<u>NAME</u>	<u>REPRESENTING</u>
George Diwachak	USGS
David Dallison	USFS
Elmer Startz	Cities Service Company
Lincoln Lyman	Lyman Construction Company

The onsite inspection was held at the staking request stage of the project so that all concerns could be implemented in the Application for Permit to Drill (APD).

Several site inspections were made previous to the joint pre-drill inspection by U.S. Forest Service and the Dirt Contractor to identify the best access route and drillsite. Forest Service Interdisciplinary Team (I.D. Team) input was developed from these inspections. Copies are included in Appendix 2. The Surface Use Plan of the APD incorporates the 5 I.D. Team reports as integral parts of the application (See Appendix 3).

## DESCRIPTION OF PROPOSED ACTION

### Proposed Action

1. Location                      State: Utah  
   County: Garfield  
   Section 15, T. 35S., R. 1E., SLB&M
2. Surface Ownership              Location: Public  
   Access Road: Public  
   Status of Reclamation Agreements: Not Applicable

3. Dates — APD Filed: July 20, 1981

APD Technically Complete: July 21, 1981

APD Administratively Complete: July 21, 1981

4. Project Time Frame

Starting Date: Upon Approval

Duration of drilling activities: 100 days

A period of 30 to 60 days is normally necessary to complete a well for production if hydrocarbons are discovered. If a dry hole is drilled, recontouring and reseeding would normally occur within one year; revegetation or restoration may take several years. If the well is a producer, an indefinite period of time would occur between completion and rehabilitation.

5. Related actions of other federal or state agencies and Indian tribes: None Known

6. Nearby pending actions which may affect or be affected by the proposed action: None Known

7. Status of Variance Requests: None Known

The following elements of the proposed action would/could result in environmental impacts:

1. A drill pad 250' wide x 300' long including a reserve pit 100' x 150' would be constructed. Approximately 2.0 miles of new access road, averaging a 16' driving surface, would be constructed and approximately 2.0 miles of existing trail would be reconstructed to 16' of driving surface from a maintained road.

Cities Service Company states in Item 2 of the Surface Use Plan of the APD that they will abide strictly by the conditions and requirements detailed in the I.D. Team Engineering Report included in APD, Appendix 3 and in Appendix 4.

2. Drilling - Outlined in APD
3. Waste Disposal - Drill cuttings and drilling fluids will be buried in the reserve pit. Trash will be confined to a fenced pit and removed upon clean up operations.
4. Traffic - Confined to operational and service vehicles. Heavy equipment loads would be frequent during rig-up and rig-down.
5. Water Requirements - Water would be hauled over access roads from Birch and Cherry Creeks. Proper agreements and/or permission will be obtained by the Dirt Contractor.
6. Completion - Operations would depend upon discovery of hydrocarbons.
7. Production - Facilities or location are outlined in Exhibit G of the APD.
8. Transportation of Hydrocarbons - Trucked over access roads to refining facilities.

Details of the proposed action are described in the Application for Permit to Drill.

#### RELATED ENVIRONMENTAL DOCUMENTS

"Environmental Assessment No. 390-80, for Cities Service Company No. 1 well, Section 27, T. 35S., R. 1E., Lease No. U-33917" Reference copies are available at the preparing office.

## ENVIRONMENTAL CONSIDERATIONS OF THE PROPOSED ACTION.

Descriptions of the environment of the area are contained in the U.S.F.S. I.D. Team Reports included in Appendix 2, EA No. 390-80 and the Environmental Documents cited as references for this EA. The analysis of environmental effects within this Assessment is directed at specific impacts posed by the proposed action.

### REGIONAL SETTING/TOPOGRAPHY

The proposed drillsite and access road are located in a rugged isolated section of the Dixie National Forest (See Exhibits E and E<sub>1</sub> of APD, Appendix 3 and Figure 1, Appendix 4). The drillsite is situated on top of a mountain saddle above Cherry Creek, about 1 mile South of Main Canyon. Area topography consists of gently sloping benchlands and associated steep sideslopes.

Construction of the wellsite would involve a maximum cut of 11.2 feet and maximum fill of 22.6 feet for pad leveling. No major imbalance of cut and fill material would be expected based on visual observations of the site terrain. See Exhibit G of APD for a cut and fill plat of the proposed site.

### GEOLOGY

#### 1. Other Local Mineral Resources to be Protected

Commercially valuable deposits of coal are contained in the Straight Cliffs Formation with 500 feet of the surface. The wellsite is 2 miles Southeast of the abandoned Cherry Creek Coal Mine. The well area is not under a Federal coal lease. Logging for coal behind the surface casing would provide valuable information concerning Straight Cliffs coal.

Isolating coal beds with cement would provide protection of the potential resource.

## 2. HAZARDS

### a. Land Stability

No major land stability problems would be expected at the wellsite; however, portions of the wellsite would be constructed in fill material and pit integrity could be questionable with improper construction. Keyseating the pit and compacting the dike in lifts would provide safeguards.

Some instability could occur on portions of the access road planned for construction across steep sideslopes. One section of road on the sideslope on the east side of Cherry Creek would cross the lower portion of a slump area that appears to be active during wet years. At present time, there appears to be little movement and the seep area is dry. Construction of the road in this steep slump area should keep cuts to a minimum and use fill material to cross the area to avoid activating mass movement.

### b. Subsidence

No subsidence is expected in the area; however, the withdrawal of fluids could cause subsidence.

### c. Seismicity

The proposed wellsite is in an area of minor to moderate seismic risk. The operating plan does not account for this potential hazard.

### d. High Pressure Zones/Blowout Prevention

No high pressure zones are anticipated. Blowout prevention equipment is detailed in APD.

## B. SOILS

### 1. General Soil Character

Soils in the area are generally shallow, derived from the Straight Cliffs Formation, which consists of massive sandstone with associated beds of conglomerate, shale and limestone. Numerous rock outcrops are also present. Topsoil would be removed and stockpiled at the wellsite. Soils would be disturbed by road construction and topsoil would probably be lost. Road construction should ensure that erosion control measures such as culverts, dips, seeding of cut and fill slopes and use of fill material to cross slump area are utilized to provide stability. Due to the amount of interbedded clay shales in the Straight Cliffs Formation, surfacing of the road would be necessary for all-weather access. A source of surfacing material may be available along the access route.

### Erosion/Sedimentation

Erosion and associated sedimentation would increase due to surface disturbances and vegetation removal. These increases would not be expected to have a significant adverse impact. Reseeding disturbed areas, surfacing roads with materials of adequate bonding capabilities with a depth adequate to bear expected loads, insloping roads with rock lined inside ditches, culverts installations at drainage crossing and construction of rolls and dips to drain water on level stretches of road are means of reducing accelerated erosion/sedimentation associated with construction.

## C. AIR QUALITY

The wellsite is in a Class II attainment area. Air quality would decrease temporarily from vehicle and equipment emissions and fugitive

dust decreasing substantially if production is established and returning to pre-drilling levels upon abandonment.

#### D. NOISE

Ambient noise would increase temporarily from vehicle and equipment operations affecting wildlife in a distributional sense and disrupting the solitude of the area for some Forest users.

#### E. WATER RESOURCES

##### 1. Hydrologic Character

###### a. Surface Waters:

The project area is within the Escalante River drainage system which flows southeasterly toward Lake Powell. The access road crosses stream channels in four locations, including Birch Creek and Cherry Creek, perennial streams. Several dry wash tributaries would also be crossed. The operator has proposed to follow the recommendations of the U.S.F.S. construction engineering report (See Appendix 2 and APD) which details construction/engineering materials and methods necessary to provide a stable roadbed and reduce erosion.

Road construction and use would increase soil erosion and could significantly increase sediment delivery to Cherry Creek. Implementation of recommended construction practices would, however, minimize sediment loads.

Activities at the drillsite should not result in any significant impacts on water resources as adequate sanitation facilities have been proposed. Key seating and lining the reserve pit would provide better fluid retention capabilities.

Water for drilling purposes would be obtained from private sources on Birch and Cherry Creeks. No impact on stream flow or downstream users is expected.

b. Grounded Waters:

Fresh or usable water may be found in the Straight Cliffs Formation (0-500 ft.). Usable water may be found as deep as the Entrada Sandstone (1500-3000 ft.). The proposed 3000 ft. of surface casing and cementing program would protect aquifers, however, lost circulation zones could prevent cement from reaching the surface.

2. Water Quality

a. Surface Waters:

The potential for a spill of oil, water, or drilling fluids exists at the wellsite. Increased sedimentation from construction of site and road should not adversely affect water quality. Lining and keyseating the reserve pit and diking any storage tanks if oil production would be discovered would safeguard against spills.

b. Ground Waters:

Insignificant impacts are expected to ground water quality as surface casing and cementing program should prevent commingling of aquifers and potential contamination by introduction of drilling fluids. Lining the reserve pit, if conditions warrant would provide additional protection for ground water quality.

F. FLORA and FAUNA

1. Endangered and Threatened Species Determination

Based on the informal comments received from the U.S. Forest Service on July 1, 1981 and the determination made in EA 390-80, we determine



that there would be no effect on endangered and threatened species and their critical habitat.

## 2. Flora

A complete description of the vegetation of the area is contained in EA No. 390-80. Vegetation removal due to road and pad construction would necessitate reseeding for complete restoration. Overall impacts to area plant communities would not be considered significant.

## 3. Fauna

A description of area wildlife appears in EA 390-80. Drilling and construction activities would disturb wildlife in a distributional sense and they would probably avoid the immediate area during the project.

### G. 1. Land Uses

Primary land uses of the area are grazing and recreation. Activities are limited due to the lack of access which restricts travel to hiking or horseback. Road construction and development would allow better access to the area increasing human intrusion and associated affects. Improving access to the abandoned Cherry creek Coal Mine in SW/4 Section 9, T. 35S., R. 1E. could benefit the coal lessee for the 40 acre tract in SE/4 SE/4 Section 8, T. 35S., R. 1E.

### 2. Affected Floodplains and/or Wetlands

Several intermittent drainages and two perennial streams would be crossed by the access road. No suitable alternate access routes are available in the area and road construction across Birch and Cherry Creeks cannot be avoided. Insignificant impacts would be expected to the limited floodplains and wetlands involved by project construction.

### 3. Roadless/Wilderness Area

Not Applicable

#### H. AESTHETICS

The operation would not blend in with the local surrounding. road and pad construction would change the natural elements of the landscape and should be mitigated as much as possible during the construction phase or immediately after. Using vegetation and rock outcrops to stabilize cuts and fills, maintaining as much existing vegetation as possible as road screens, and revegetating cut and fill slopes following road construction are feasible means to reduce visual impacts during operations. Any potential permanent production equipment should be painted a color to blend in with the surroundings. Upon abandonment, proposed restoration would be completed and, over time, the area should return to a natural condition.

#### I. SOCIOECONOMICS

A complete description of socioeconomic impacts of hydrocarbon exploration on the Escalante Region is described in EA 390-80. No significant socioeconomic impacts would be expected by implementation of this project.

#### J. CULTURAL RESOURCE DETERMINATION

Based on the formal comments received from U.S.F.S. on July 16, 1981 and contained in the I.D. Team Archaeological Report (Appendix 2), we determine that there would be no effect on cultural resources subject to the access route recommended in the archaeological report. The proposed access route of the APD incorporates the archaeological recommendations.

Adverse Environmental Effects:

1. If approved as proposed:
  - a. About 10 acres of vegetation would be removed, increasing and accelerating erosion potential.
  - b. Pollution of groundwater systems could occur with the introduction of drilling fluids into the aquifer(s). The potential for interaquifer leakage and lost circulation is ever-present, depending on the casing program.
  - c. Minor air pollution would be induced on a temporary basis due to exhaust emissions from rig engines and support traffic.
  - d. The potential for fires, leaks, spills of gas and oil or water exists.
  - e. During construction and drilling phases of the operation, noise and dust levels would increase.
  - f. Distractions from aesthetics during the lifetime of the project would exist.
  - g. Erosion from the access road and site would eventually be carried as sediment in the Birch Creek and Cherry Creek. The potential for pollution would exist through leaks and spills.
  - h. If hydrocarbons would be discovered and produced, further development of the are could be expected to occur, which wold result in the extraction of an irreplaceable resource, and further negative environmental impacts. These impacts include the cumulative loss of wildlife habitat due to the areas necessary for roads, pipelines, drillsites, and transmission lines. These actions may disrupt wildlife social behavior and force habitat relocation over an extended period of time. In addition, the

cumulative effects of non-point erosion become substantial in a developing field, primarily those located near perennial streams where siltation and sedimentation are critical to aquatic life cycles.

i. Hydrocarbon production would cause minor erosional, air quality, noise, wildlife and aesthetic impacts with severity dependent upon transportation methods.

RECOMMENDED STIPULATIONS

1. All mitigative measures presented in the APD, incorporating recommendations of USFS I.D. Team Reports must be adhered to.
2. Construction activities will be coordinated with the USFS, Escalante District Forest Ranger.
3. The reserve pit will be keyseated with dikes compacted in lifts to prevent seepage or failure.
4. If fractured rock materials are encountered during excavation, the reserve pit will be lined with an impervious material.
5. Logs will be run behind the surface casing to identify potential coal in the Smokey Hollow Member of the Straight Cliffs Formation.
6. All necessary USFS permits must be obtained prior to commencing construction.

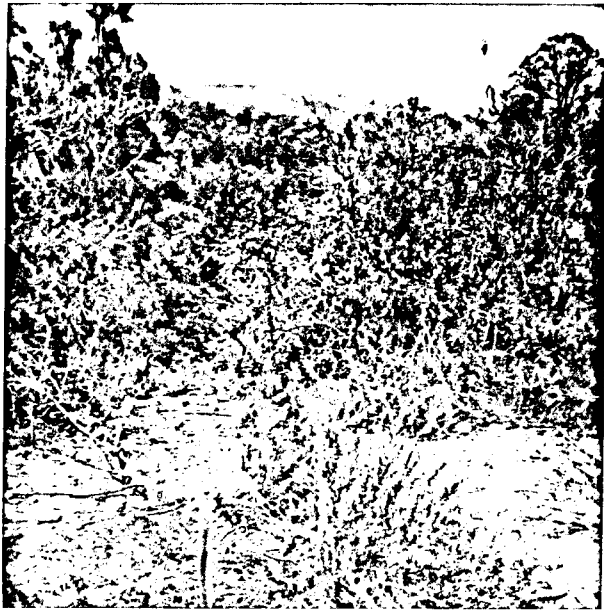
Controversial Issues

None

We have considered the proposed actions in the preceding pages of this EA and find, based on the analysis of environmental consideration provided therein, no evidence to indicate that it will significantly (40 CFR 1508.27) impact the quality of the human environment.

## SELECTED REFERENCES

- Anderson, B.A. 1979 Desert Plants of Utah: Cooperative Extension Service, Utah State University, Logan, Utah. 146 p.
- Bureau of Land Management, 1979, Final Initial Wilderness Inventory, Utah: U.S. Department of the Interior, BLM, Salt Lake City, Utah, 50 p.
- Bureau of Land Management, 1979, Intermin Management Policy and Guidelines for Lands Under Wilderness Review: U. S. Department of the Interior, BLM, Washington, D.C., 32 p.
- Keller, E. A. 1976, Environmental Geology: C. E. Merril Publishing Company, Columbus, Ohio. 488 p.
- Rocky Mountain Association of Geologists, 1972, Geologic Atlas of the Rocky Mountain Region: Denver, Colorado. 331 p.
- U.S. Geological Survey, 1979, Development of Coal Resources in Southern Utah, Final Environmental Statement: Department of the Interior, U. S. Geological Survey, Washington, D.C. 611 p.
- Wilson, LeMoyné, et.al, 1975, Soils of Utah: Agricultural experiment Station, Bulletin 492, Utah State University, Logan, Utah. 94 p.
- Zarn, Mark, 1977, Ecological Characteristics of Pinyon-Juniper Woodlands on the Colorado Plateau: U. S. Department of Interior, Bureau of Land Management, Technical Note 310, Denver, Colorado 183 p.
- U. S. Forest Service, 1979, Summary-Final Environmental Statement, RARE II: U.S. Department of Agriculture, Forest Service, FS 324, 55 p.
- U. S. Forest Service, 1973, National Forest Landscape Management Volume 1: Department of Agriculture, U. S. Forest Service, Gov't Printing Office, Washington. 76 p.



CITIES SERVICE  
# 1

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W



CITIES SERVICE  
# 1

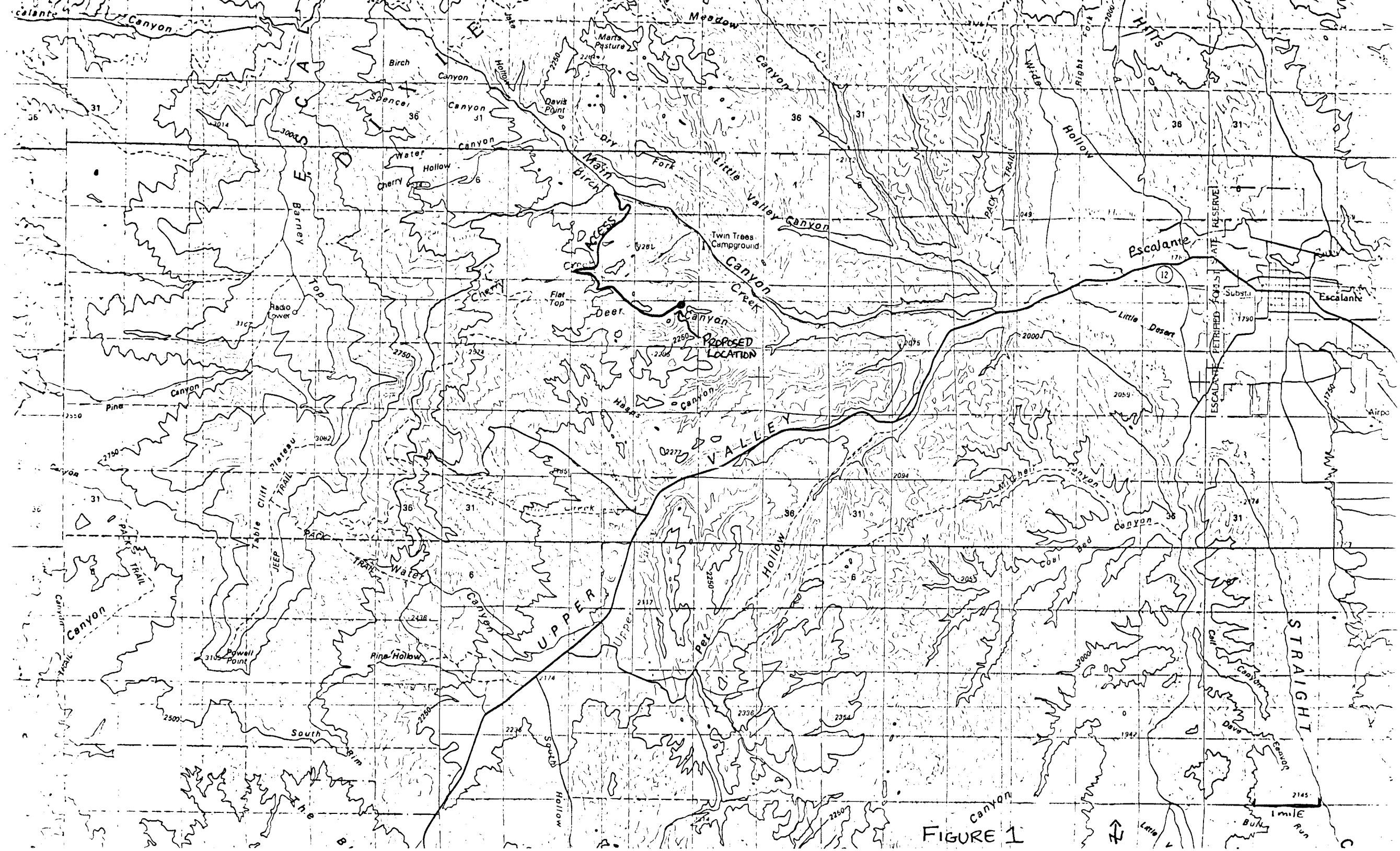
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CITIES SERVICE  
# 1

WEST TOWARD  
RESERVE PIT





DISTRICT GEOLOGIST, E, SALT LAKE CITY, UTAH

DISTRICT ENGINEER, OEG, SALT LAKE CITY, UTAH

SUBJECT: AND MINERAL EVALUATION REPORT

LEASE NO. U33916

OPERATOR: CITIES SERVICE CO.

WELL NO. 1

LOCATION: SW 1/4 NE 1/4 sec. 27 1/2, T. 35 S, R. 1 E, SLM

GARFIELD County, UTAH

1. Stratigraphy:

STRAIGHT CLIFFS FM

JOHN HENRY MEMBER 0

SMOKY HOLLOW MEMBER 100'

TIBBET CANYON MEMBER 400'

TROPIC SHALE 500'

DAKOTA SANDSTONE 1150'

ENTRADA SS 1566'

NAVAJO SS 3082'

KAYENTA FM 4619'

WINGATE SS 4938'

CHINLE FM 5159'

MOENKOPI FM 5702'

TEMPWEAP MEM. 6484'

KAIBAB L.S. 6576'

WHITE RIM SS

TEMPWEAP FM

CEDAR MESA FM

ELEPHANT CANYON FM

HERMOSA GP

MOLAS FM 9

REOWALL L.S. 9

TD 10

2. Fresh Water:

FRESH OR USEABLE WATER MAY BE FOUND IN THE STRAIGHT CLIFFS FM (0-500'). USEABLE WATER MAY BE FOUND AS DEEP AS THE ENTRADA SS (1566').

3. Leasable Minerals:

OIL OR GAS IN: TEMPWEAP MEM, MOENKOPI FM 6484',  
KAIBAB LS 6576',  
REOWALL LS 9186

COAL IN SMOKY HOLLOW MEMBER, STRAIGHT CLIFFS FM 100'

4. Additional Logs Needed:

GR-FDC LOG FOR POSSIBLE COAL ZONES IN SMOKY HOLLOW MEMBER, STRAIGHT CLIFFS FM; BEHIND SURFACE CASING.

5. Potential Geologic Hazards:

NONE ANTICIPATED

6. References and Remarks: WRD REPORT, T 35 S R 1 E S 34 UPPER VALLEY # 3

UGMS COAL MONOGRAPH; DOELLING  
USGS COAL RESOURCE MAP # C60

Signature: Kenneth J. Selt

Date: 6 - MAY - 1980



CITIES SERVICE COMPANY  
ENERGY RESOURCES GROUP

Box 1919  
Midland, Texas 79702  
(915) 685-5600

OCT 26 1981

July 20, 1981

Mr. E. W. Guynn, District Oil & Gas Engineer  
U.S. Geological Survey  
Conservation Division, Branch of Oil & Gas  
2000 Administration Building  
1745 West, 1700 South  
Salt Lake City, Utah 84104

Re: NTL-6 Request for Approval of Operations  
Application for Permit to Drill  
Cities Service Company  
Federal B No. 1  
Garfield County, Utah  
Lease #U-33916

Dear Sir:

Cities Service Company is the Designated Operator of U.S. Oil and Gas Lease #U-33916 and proposes to drill a well on the leased premises to test for oil and gas at a location 1980' FNL, 1979' FEL, Section 15-T35S-R1E, Salt Lake Base and Meridian, Garfield County, State of Utah.

The location, work area and access road have been staked. It is approximately nine (9) miles due west of Escalante, Utah, within the confines of the Dixie National Forest.

In accordance with the requirements stated in NTL-6 of the National Environmental Policy Act, our Application for Permit to Drill and supporting evidence is hereby submitted:

1. Form 9-331C, Application For Permit to Drill.
2. Location, elevation and acreage dedication plat certified by Rowan M. Butler, State of Utah Licensed Land Surveyor No. 3263, dated June 26, 1981. Exhibit "A" attached.
3. The elevation of the unprepared ground is 7253.3 feet above sea level.
4. The geologic surface formation is the Straight Cliffs in the Cretaceous.

5. Estimated tops of important geologic markers:

Navajo	3117'
Kayenta	4860'
Wingate	5179'
Chinle	5400'
Moenkopi	5943'
Timpoweap	6725'
Kaibab	6857'
White Rim	6985'
Toroweap	7152'
Ceda Mesa	7690'
Elephant Canyon	8577'
Hermosa	8977'
Molas	9383'
Redwall	9454'
Total Depth	10,195'

6. Estimated depths of anticipated water, oil/gas or minerals:

Timpoweap	6725'	Oil/Gas
Kaibab	6857'	Oil/Gas
Redwall	9454'	Oil/Gas

No surface water is anticipated.

7. The proposed casing program is as follows:

Casing String	Hole Size	Interval	Section Length	Size (OD)	Weight, Grade & Joint	New Or Used
Conductor	26"	0-40	40'	20"	94#-H40-8R	New
Surface	17-1/2"	0-2500	2500'	10-3/4"	40.5#-K55-ST&C	New
		2500-3000	500'		45.5#-K55-ST&C	New
Intermediate	9-1/2"	0-5230	5230'	7-5/8"	26.4#-K55-LT&C	New
		5230-6500	1270'		26.4#-N80-LT&C	New
		6500-7200	700'		26.4#-S95-LT&C	New
Liner	6-1/2"	6900-10195	3295'	5-1/2"	17.0#-N80-SFJ	New

2500' of 2-1/16" 3.25# J55 parasite tubing will be attached to outside of 10-3/4" casing for mud aeration. Inlet to 10-3/4" casing will be at 2500'. This parasite string will be cemented in place during the course of cementing the 10-3/4" surface casing.

8. Cement Program

Conductor (20") - Cement to surface with ready mixed cement.

Surface (10-3/4") - Cement with 2550 sacks Halliburton Lite w/1/4# Flocele, 5# Gilsonite, 3# Salt and 2% CaCl<sub>2</sub>, followed by 200 sacks Class B w/1/4# Flocele and 1.3# Salt/sack. If cement does not circulate, run temperature survey then finish cementing to surface through 1" in annulus, using Class H with 2-4% CaCl<sub>2</sub> in stages.

8. Cement Program - Continued

Intermediate (7-5/8") - Cement with 550 sacks Halliburton Lite Thick-Set with 6# Gilsomite and 1/4# Flocele per sack, followed by 300 sacks Class B Thick-Set with 6# Gilsomite and 1/4# Flocele per sack. Precede cement with 1000 gallons mud flush and 30 barrels C-53 spacer.

Production (5-1/2") - Cement with 200 sacks Class H, 50-50 Pozmix with 2% gel, 0.75% CFR-2, 0.6% Halad 9 and 5% KCl. Precede cement with 1000 gallons mud flush and 30 barrels C-53 spacer.

9. Minimum Specifications for Pressure Control

Pressure control equipment will consist of 12", 3000# ram type preventor with one set blind rams and one set pipe rams; 12", 1500# annular type preventor and rotating head, including 3000# choke manifold and 80 gallon accumulator with floor and remote operating stations and auxiliary power system.

An upper and lower kelly cock will be installed and maintained in operable condition and a drill string safety valve and drill string BOP in the open position will be available on the rig floor.

After setting the 10-3/4" surface casing, the blowout preventors and related control equipment shall be pressure tested to rated working pressures by an independent testing company. The U.S. Geological Survey will be notified in sufficient time to witness the tests and will be furnished a copy of the pressure test report.

Pipe rams will be operationally checked each 24 hour period, as will blind rams and annular preventor each time pipe is out of the hole. Such checks of BOP's will be noted on the daily drilling reports.

Accumulator shall maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventors.

A mud/gas separator will be installed and be operable after setting the 10-3/4" surface casing, in order to separate air that will be introduced through the parasite string into the mud system.

10. Mud Program

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Weighting material will be on location to be added to the system if BHP dictates.

0' - 3000'

Spud mud. Gel flocculated with lime. Treat with coarse fibrous LCM.

3000' - 10,195'

Fresh water lignosulphonate system. 8.5 - 9.0#/gallon weight and 35 - 45 viscosity. PH will be controlled with caustic soda. Coarse fibrous LCM and injection of air via a parasite string on the 10-3/4" surface casing to lighten upper hole mud weight will be utilized for loss of circulation problems.

10. Mud Program - Continued

Mud system monitoring equipment with derrick floor indicators and visual and audio alarms shall be installed and operative before drilling below the 10-3/4" surface casing, and, shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- A. A recording pit level indicator to determine pit volume gains and losses.
- B. A pit volume totalizer for accurately determining mud volumes necessary to fill the hole on trips.
- C. A floline sensor to warn of any abnormal mud returns from the well.

11. Testing, Logging and Coring program

- A. Three (3) DST's are anticipated. One each in the Timpoweap, Kaibab, and Redwall. Other zones of interest may be tested as needed.
- B. The logging program will consist of the following Schlumberger logs: FDC/CNL-GR-Cal, DLT-SF, PML-Cal, BHC Sonic-GR-Cal, HDT (Dipmeter). Other logs may be selected at well site to better evaluate any shows.
- C. No coring is anticipated.
- D. Mud logging unit (2 man) from 4500' to TD 10,195'.
- E. Completion procedures will be to stimulate Dolomite & Limestone formations with HCl acid. Stimulate Sandstone formations with a frac of gelled water and sand.

12. Anticipated Abnormal Pressures and Temperatures

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. In fact, the major problem in the area is from under-pressured zones and resultant in loss of circulation.

No hydrogen sulfide or other hazardous gasses or fluids have been found, reported or known to exist in the area.

13. Anticipated Starting Date and Duration of Operations

The anticipated starting date will be as soon as possible after examination and approval of drilling requirements by the U.S. Geological Survey and U.S. Forest Service. Rotary drilling equipment will be utilized to drill the well to TD 10,195' and run casing. This equipment will then be rigged down and the well completed with a pulling unit. Operations should be completed within 100 days after spudding the well and drilling to casing point.

Page 5

14. Designation of Operator

Natural Resources Corporation is the owner of Oil and Gas Lease #U-33916. The attached "Designation of Operator" designates Cities Service Company as operator and local agent with full authority to act in behalf of Natural Resources Corporation with respect to lease #U-33916.

15. Multi-Point Requirements to Accompany Application for Permit to Drill

The multi-point surface use and operation plan for submission to the appropriate surface management agency is attached.

The surface management agency contact is:

United States Forest Service  
c/o Millard A. Dumas  
Box 246  
Escalante, Utah 84726

Office Phone: 801/826-4421

16. If the District Engineer need additional information to evaluate the request, please advise.

Yours very truly,

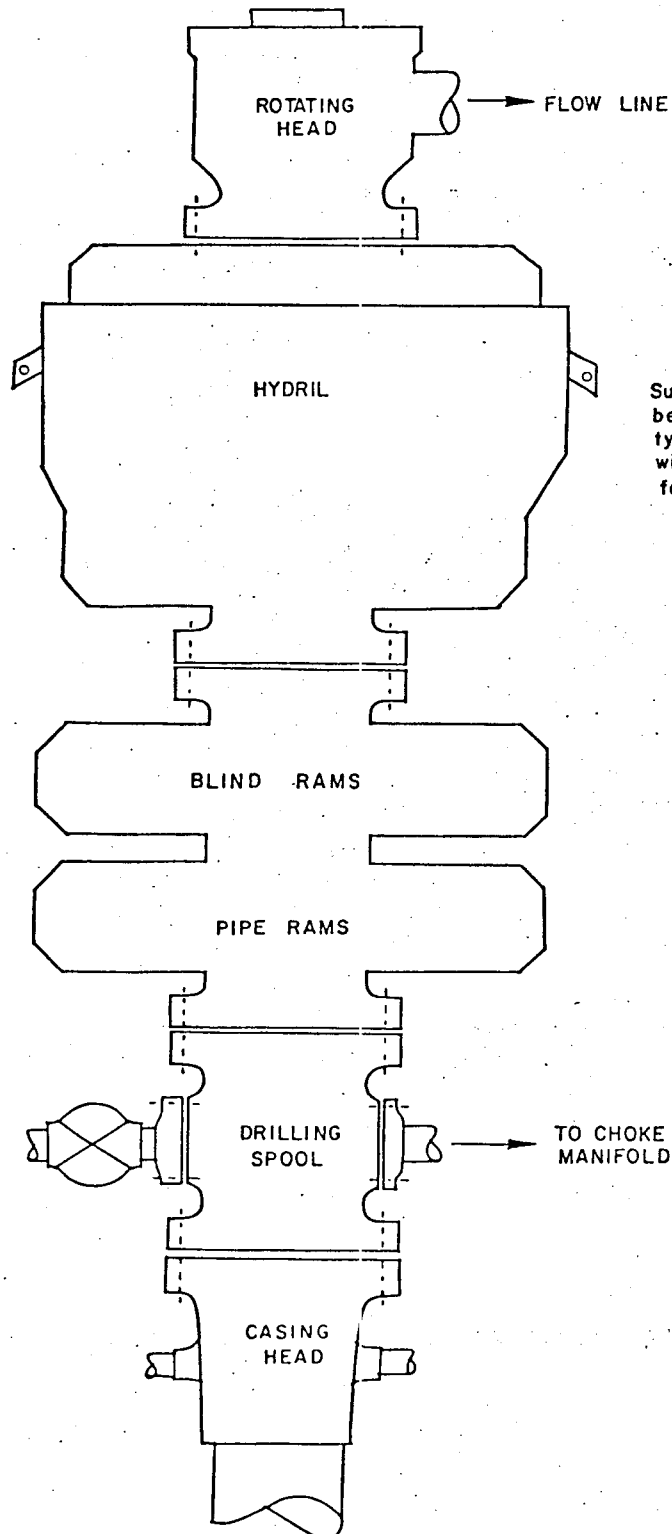


E. Y. Wilder  
Region Operations Manager  
Southwest Region  
E & P Division

EYW/dy

Attachments

# BLOWOUT PREVENTER DIAGRAM



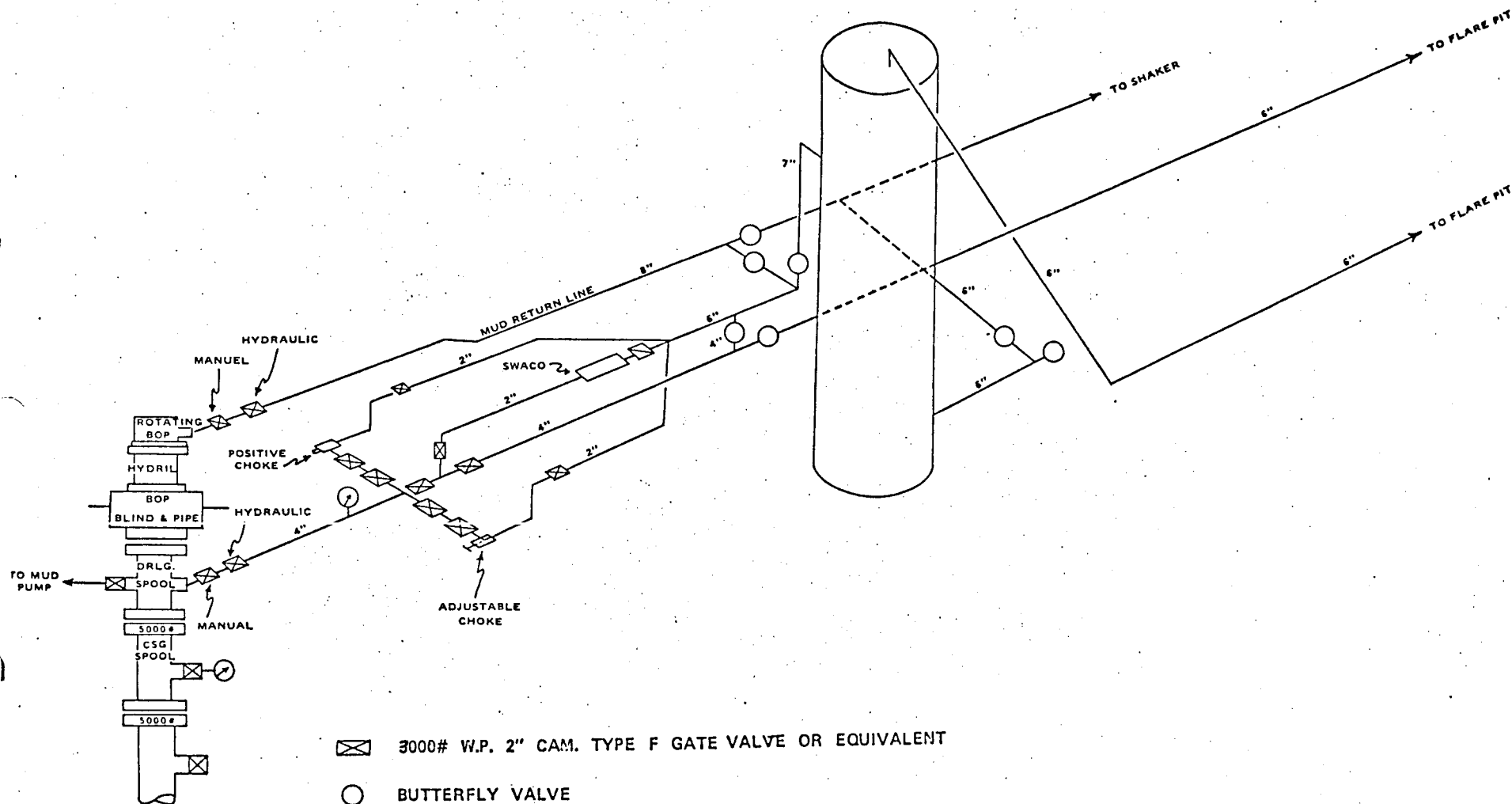
## CLOSING METHOD

Sufficient accumulator volume shall be available to operate both the bag type preventer and pipe ram preventer with a snap-action through the following steps: close-open-close.

Cities Service Co's  
Federal "B" No. 1  
1980' FNL & 1980' FEL  
Section 15 - T.35S. - R.1E.  
Garfield County, Utah  
Lease #U-33916



CITIES SERVICE OIL COMPANY



Cities Service Co's  
Federal "B" No. 1  
1980' FNL & 1980' FEL  
Section 15 - T.35S. - R.1E.  
Garfield County, Utah  
Lease #U-33916

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE:

SERIAL NO: U-33916

and hereby designates

NAME: Cities Service Company

ADDRESS: P.O. Box 1919

Midland, TX 79702

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 35 South, Range 1 East

Section: 10

Section: 15

Garfield County, Utah

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

NATURAL RESOURCES CORPORATION

BY: Harvey L. Baker

signature of lessee

Harvey L. Baker, Vice President

999 Eighteenth Street  
Curtis Podium, Suite 350  
Denver, CO 80202

May 14, 1981

Date

Address

## MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Cities Service Company  
Well No. 1 Federal "B"  
1980' FNL and 1979' FEL Section 15-T35S-R1E  
Garfield County, Utah  
Lease #U-33916

This plan is submitted with the Application for Permit to Drill the captioned well. Its purpose is to identify the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal may be made of the impact of the operation upon other resources.

The well has been staked by a registered Utah land surveyor and the work area and access road are staked and flagged. Mr. Larry Davis, with the Utah State Parks and Recreation Department, has been engaged to make an Archaeological Reconnaissance of the work area and access road. His findings concerning cultural resources will be reported to the United States Forest Service, Escalante Ranger District.

### 1. Existing Roads

- A. The proposed well site and elevation plat is shown as Exhibit "A".
- B. The distance from Escalante, Utah is nine (9) miles as the crow flies, but somewhat further by road. Proceed westerly 4.5 miles on Highway #54, thence northwesterly on the "Main Canyon" road 6 miles. At this point, turn southwesterly 2 miles, following an existing trail to the "Cherry Creek Mine", thence southeasterly 2 miles on proposed new road to the location. These roads are shown on Exhibit "E" and "E<sub>1</sub>".
- C. All roads to the location are color coded on Exhibits "E" and "E<sub>1</sub>". Construction of the new access road will start at the "Main Canyon" road and will consist of rebuilding the 2 miles of trail to the "Cherry Creek Mine" and new construction of 2 miles of road from the "Cherry Creek Mine" to the location.
- D. This is an exploratory well. All existing roads within a 3 mile radius are shown on Exhibit "E".
- E. The existing roads (State Highway #54 and the Main Canyon Road) need no improvement.

### 2. Planned Access Roads

An "in depth" study and analysis of the proposed access route has been prepared by Joseph G. Black, Area Engineer, Dixie National Forest, Panquitch Engineers, United States Forest Service.

Cities Service Company and its contractor, Lyman Construction Company, Inc., of Escalante, Utah, will abide strictly by the conditions and requirements detailed in this report. It is attached as Exhibit "AA".

3. Location of Existing Wells

Exhibit "E<sub>3</sub>" shows existing wells within a 2 mile radius of the exploratory well.

- A. There are no water wells within a two mile radius of this location.
- B. There is one well, Cities Service Company's Federal A No. 1, currently being completed in this two mile radius.
- C. There are no abandoned wells.
- D. There are no temporarily abandoned wells.
- E. There are no disposal wells.
- F. There are no wells presently being drilled.
- G. There are no producing wells within this two mile radius.
- H. There are no shut-in wells.
- I. There are no injection wells.
- J. There are no monitoring or observations wells for other uses.

4. Location of Existing and/or Proposed Facilities

- A. Within a one mile radius of location, the following existing facilities are owned or controlled by Cities Service Company or other lessee/operators.
  - 1. Tank batteries: None
  - 2. Production facilities: None
  - 3. Oil gathering lines: None
  - 4. Gas gathering lines: None
  - 5. Injection lines: none
  - 6. Disposal lines: None
- B. If the well is productive, new facilities will be as follows:
  - 1. Production facilities will be located on drill pad, as shown on Exhibit "G".
  - 2. All well flow lines will be buried and will be on the drill pad site.

4. Location of Existing and/or Proposed Facilities - Continued

3. Production facilities will be 250' long and 200' wide. Unused areas of the drill pad not required for production facilities will be rehabilitated.
  4. All construction materials for battery site and pad will be obtained from site. No additional material from outside sources is anticipated.
  5. Any necessary pits will be fenced and flagged to protect livestock and wildlife.
- C. Rehabilitation, whether well is dry or productive, will be made on all unused areas in accordance with U.S. Forest Service stipulations.

5. Location and Type of Water Supply

- A. The source of water will be from Birch and Cherry Creeks. Lyman Construction Company, the contractor, will obtain permission to use this water prior to starting construction.
- B. Water will be transported by truck over existing roads.
- C. No water well is to be drilled on this lease.

6. Construction Materials

- A. As outlined in Mr. Joseph G. Blacks analysis of the proposed access road and location (Exhibit "AA"), a minimum of 4" - 6" of surfacing material should be placed at designated locations on the roadway to improve trafficability.

A possible borrow and/or surface stabilization material site exists just west of the Cherry Creek road prior to its dropping off into Cherry Creek.

- B. Any additional surfacing material will be furnished by Lyman Construction Company.

7. Handling of Waste Materials and Disposal

- A. Drill cuttings will be buried in the reserve pit.
- B. Drilling fluids will be handled in the reserve pit.
- C. Any fluids produced during drilling test or while making production test will be collected in a test tank. While drilling, if a test tank is not practicable, fluids will be handled in reserve pit. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed. If well is productive, produced water will be disposed of on-site for 30 days only, or 90 days with the permission of the District Engineer. In the meantime, application will have been made for approval of a permanent disposal method in compliance with NTL-2b.

7. Handling of Waste Materials and Disposal - Continued

- D. Chemical toilet facilities will be provided for human waste.
- E. Garbage and non-flammable waste and salts and other chemicals produced during drilling or testing will be handled in trash pit. Drill fluids, water, drilling mud and tailings will be collected in reserve pit, as shown on Exhibit "H". The trash pit will be totally enclosed with small mesh wire to prevent wind scattering trash before being removed. Reserve pit will be fenced on three sides during drilling and the fourth side fenced upon removal of rig.
- F. After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. All dangerous open pits will be fenced during drilling and kept closed until such time as the pit is levelled.

8. Ancillary Facilities

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

- A. Exhibit "G" is the Drill Pad Layout as staked with elevations by Allen's Engineering of Richfield, Utah. Cuts and fills have been drafted to visualize the planned cut and fill cross section across the location site to the deepest part of the pad. Top soil will be stockpiled per U.S. Forest Service specifications, determined at time of pre-drill inspection.
- B. Exhibit "H" is a plan diagram of the drilling rig equipment, reserve pit, trash pit, pipe racks & mud tanks. No permanent living facilities will be erected. There will be temporary house trailers on location.
- C. Exhibit "J" is a plan diagram of the proposed production facilities layout.

10. Plans for Restoration

- A. If well is abandoned, site will be restored to original condition as nearly as possible. Backfilling, levelling and contouring are planned as soon as all pits have dried. Waste disposal and spoils material will be buried or hauled away immediately to an approved sanitary land fill after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- B. The soil banked material will be spread over the area. All fill and cut slopes flat enough to revegetate will be seeded to prevent erosion. Seeding will be completed before the ground surfaces to be seeded crust over.

10. Plans for Restoration - Continued

- B. Stabilization of cut and fill slopes will be accomplished as quickly as possible. Upon completion of each road section, all exposed slopes and disturbed areas will be broadcast seeded by formula provided by the U.S. Forest Service.

Seeding of slopes will be accomplished within one week of completion of each road section. Trees removed as a result of the road construction will be chipped and blown on the seeded slopes where practicable as a mulch preparation. Trees not chipped will have the limbs lopped on three sides to a four (4) inch tip with the top being severed at that point.

In the event the test well is not a producer, the access road into the site will be scarified as a seedbed preparation and will be broadcast seeded to the same mixture as the cut and fill slopes. Scarification and seeding will be accomplished in the fall and the seed allowed to lie dormant through the winter.

- C. Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from entering; and, the fencing will be maintained until levelling and cleanup is accomplished.
- D. If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead and covered with wire mesh.
- E. The rehabilitation operations will begin immediately after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately, or the area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in the fall of the year, unless otherwise requested by the U.S. Forest Service.

11. Other Information

- A. The area is covered with pinyon-juniper, Ponderosa pine, rice grass, cheat grass and buckwheat. There are deer mouse, kangaroo rat, coyote, cottontail rabbit, mule deer, pinyon jays, Clark's nutcrackers, ravens and robins in the area.

The area involved is included in the Land Systems Inventory of the Escalante Ranger District. Basically, the geology is dominated by the Straight Cliffs Sandstone formation. Massive cliff forming sandstone is the dominant component of this formation. However, also included are argillaceous, calcareous, gypsiferous, arenaceous and carbonaceous shales. Beds of conglomerate and limestone are also present.

11. Other Information

- B. The entire access road and drilling location are on U.S. Forest Service administered lands, as shown on Exhibit "E<sub>1</sub>". Road construction will temporarily increase erosion but the increase is not expected to have an adverse affect. Surfacing of the roadway will be necessary due to the amount of interbedded clay shales in the Straight Cliff formation.
- C. The primary surface use is for grazing, recreation, logging and intermittent coal mining.
- D. The closest live water is Cherry Creek, west of the Location, as shown on Exhibits "E" and "E<sub>1</sub>".
- E. The closest occupied dwellings are in Escalante, nine (9) miles east, as shown on Exhibit "E".

12. Addendum

Attached and submitted as integral parts of the "Multi-Point Surface Use and Operations Plan" are five reports pertinent to Cities Service's proposal. They are:

- A. Exhibit "AA" - Analysis of Proposed Access Route by Joseph G. Black, Area Engineer, U.S. Forest Service.
- B. Exhibit "BB" - Special Use and Minerals Report by William A Sheehan, Minerals Forester, U.S. Forest Service.
- C. Exhibit "CC" - Soil Report by James T. Bayer, Soil Scientist, U.S. Forest Service.
- D. Exhibit "EE" - Archaeological Survey by Larry Davis, Archaeologist.

13. Lessee's or Operator's Representative

The field representatives responsible for assuring compliance with the approved surface use and operations plan are:

E. Y. Wilder  
Region Operations Manager  
P.O. Box 1919  
Midland, Texas 79702

Office Phone: 915/685-5600

Lincoln Lyman  
145 North Center  
Escalante, Utah 84726

Office Phone: 801/826-4229



Page 7

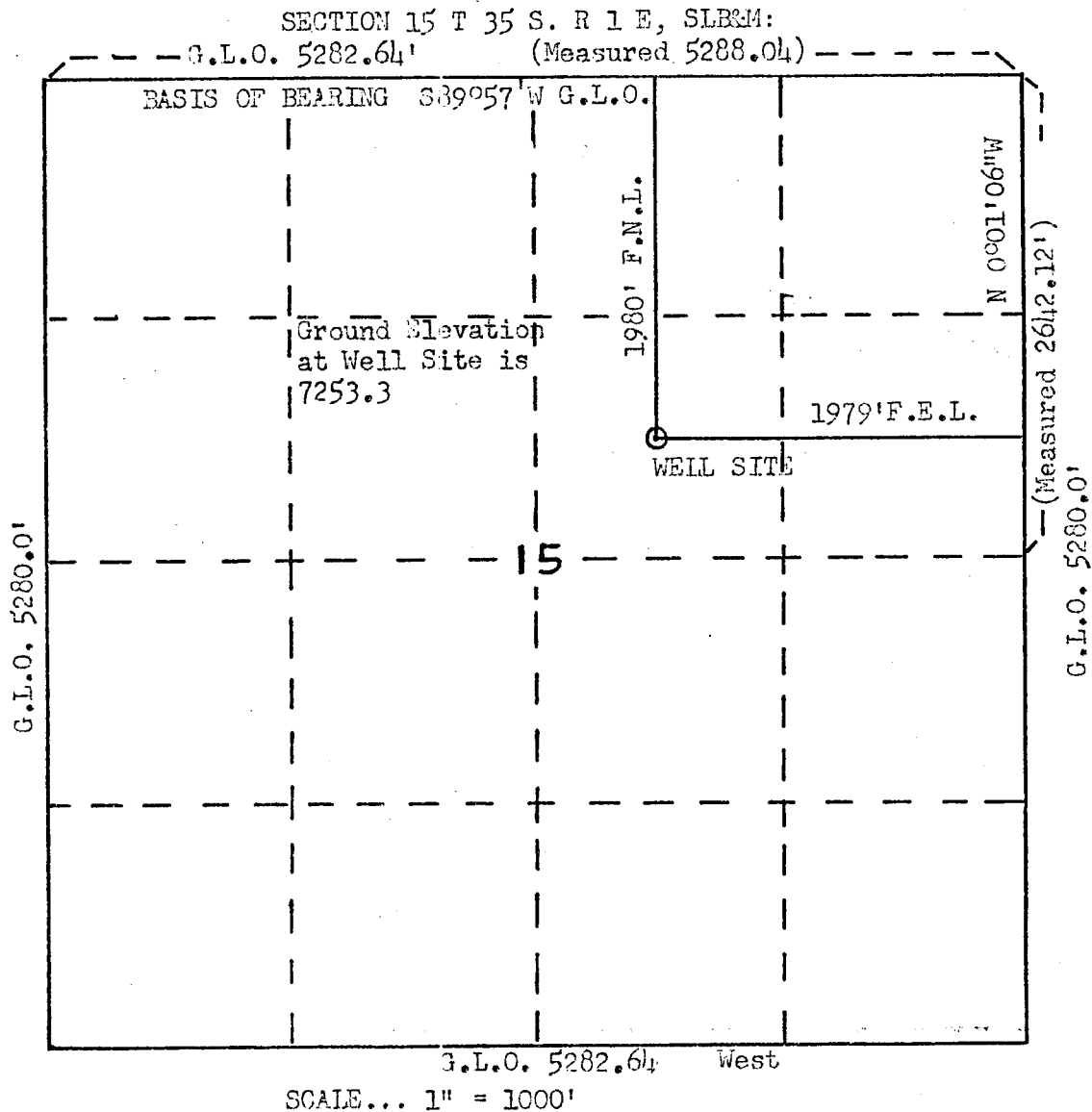
14. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Cities Service Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

7/20/81  
Date

E. Y. Wilder  
E. Y. Wilder, Region Operations Manager

## Location and Elevation Plat



ALLENS ENGINEERING OF RICHFIELD, UTAH  
 has in accordance with a request from ED WILDER  
 for CITIES SERVICE COMPANY OF MIDLAND, TEXAS  
 determined the location of Federal B # 1  
 to be 1979' F.E.L. and 1980' F.N.L. of section 15  
 Township 35 So. Range 1 East of Salt Lake Base and  
 Meridian Garfield County, Utah.

I hereby certify that this plat is an  
 accurate representation of a correct  
 survey showing the location of  
 CITIES SERVICE CO. Federal B # 1.

Date 6/26/81

*Robert M. Butler*  
 State of Utah Licensed Land Surveyor  
 No. 3263.

# EXHIBIT "E" - Access Roads to Location

END

1. Location:  
Cities Service Company  
Federal B # 1  
SW 1/4 NE 1/4 Sec. 15 T35S R1E  
Garfield County, Utah

Color Coding

Oil Road  
New Access Road  
②—① Water Haul Route

2. Water Supply and  
Closest Live Water

3. Nearest Town and  
Closest Dwelling

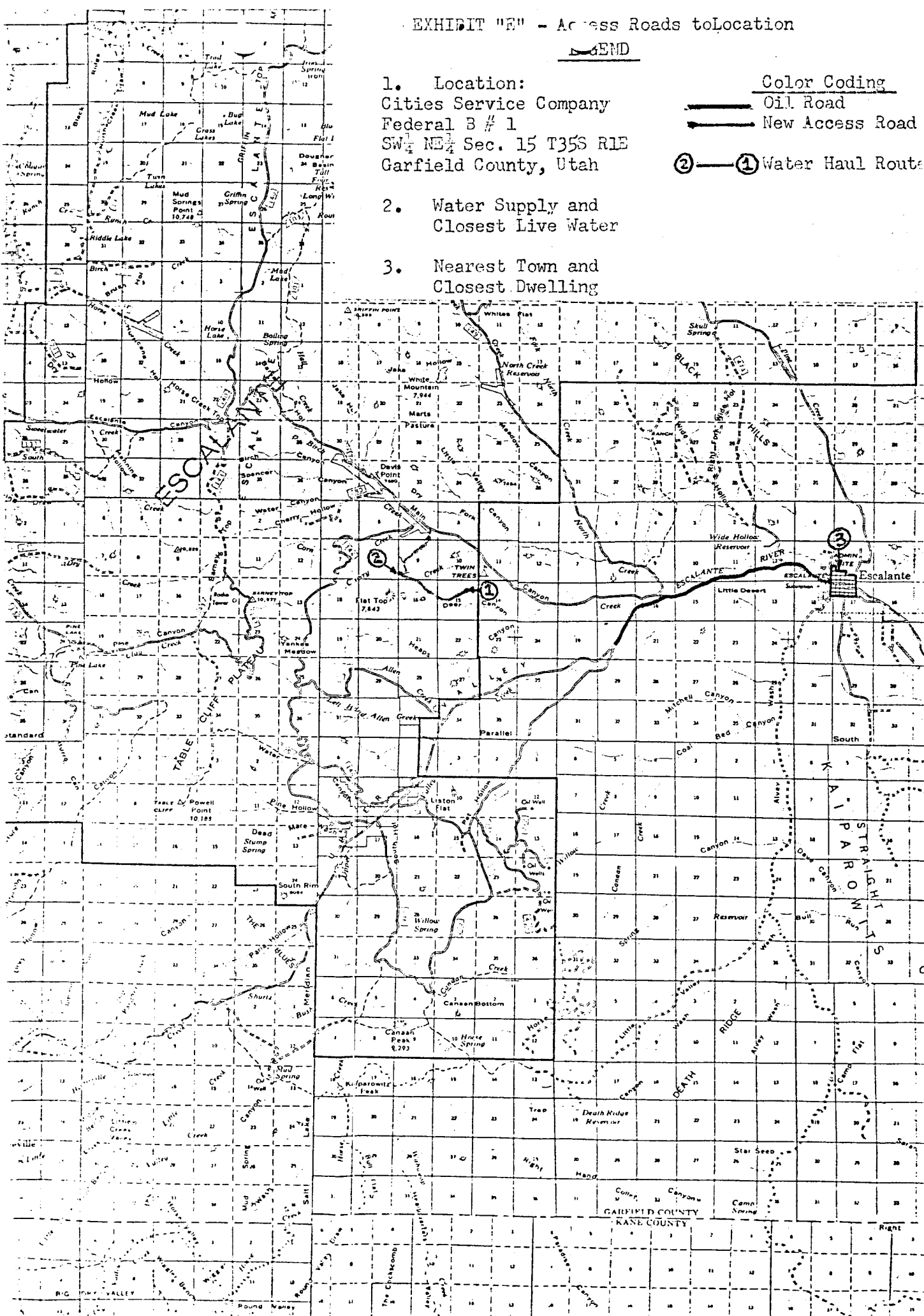


EXHIBIT "E<sub>1</sub>"  
Detail of Access Road

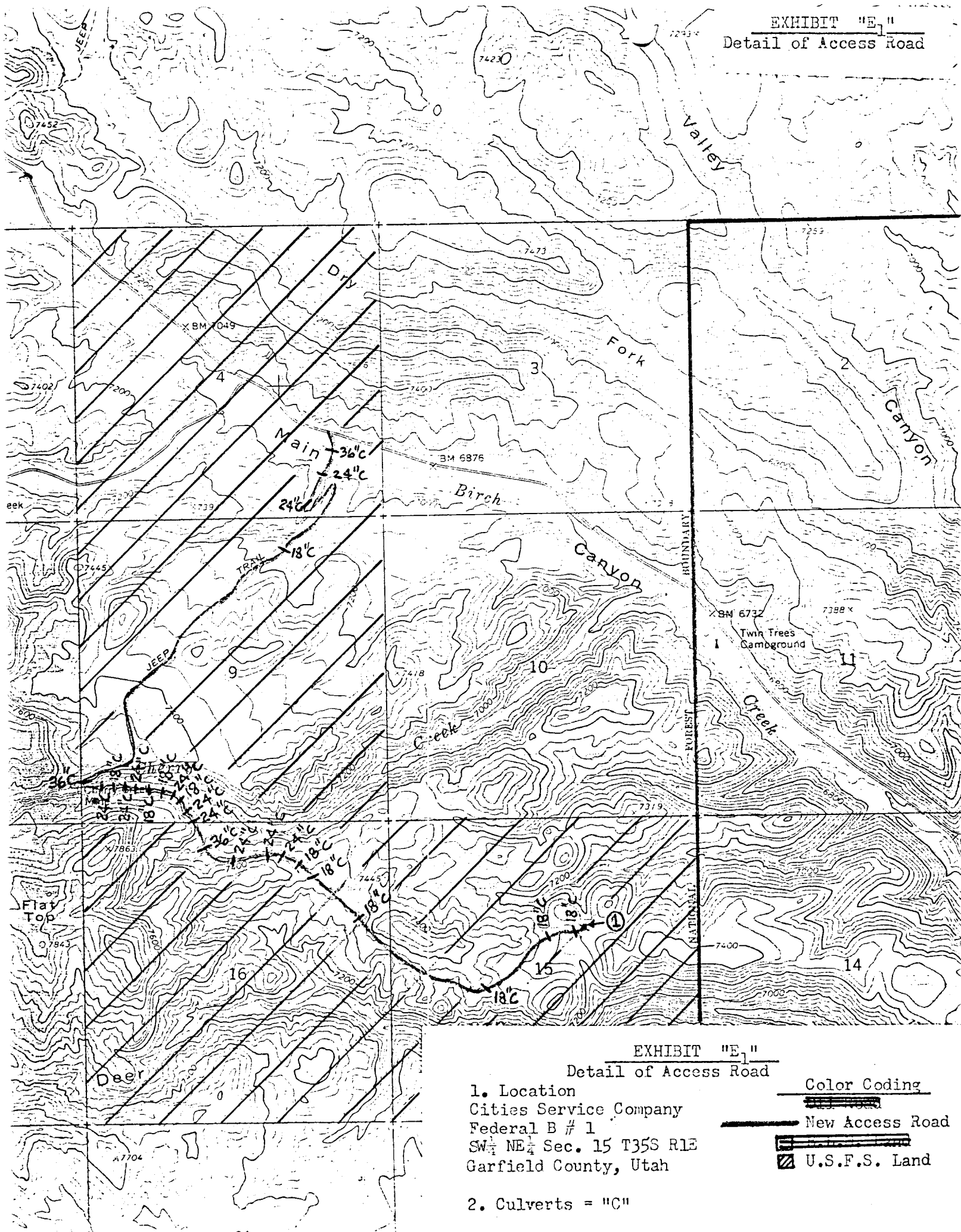


EXHIBIT "E<sub>1</sub>"  
Detail of Access Road

1. Location  
Cities Service Company  
Federal B # 1  
SW  $\frac{1}{4}$  NE  $\frac{1}{4}$  Sec. 15 T35S R1E  
Garfield County, Utah

Color Coding

- New Access Road
- U.S.F.S. Land

2. Culverts = "C"

R 1 E

EXHIBIT "E3"  
Location of Existing Wells

T  
35  
S



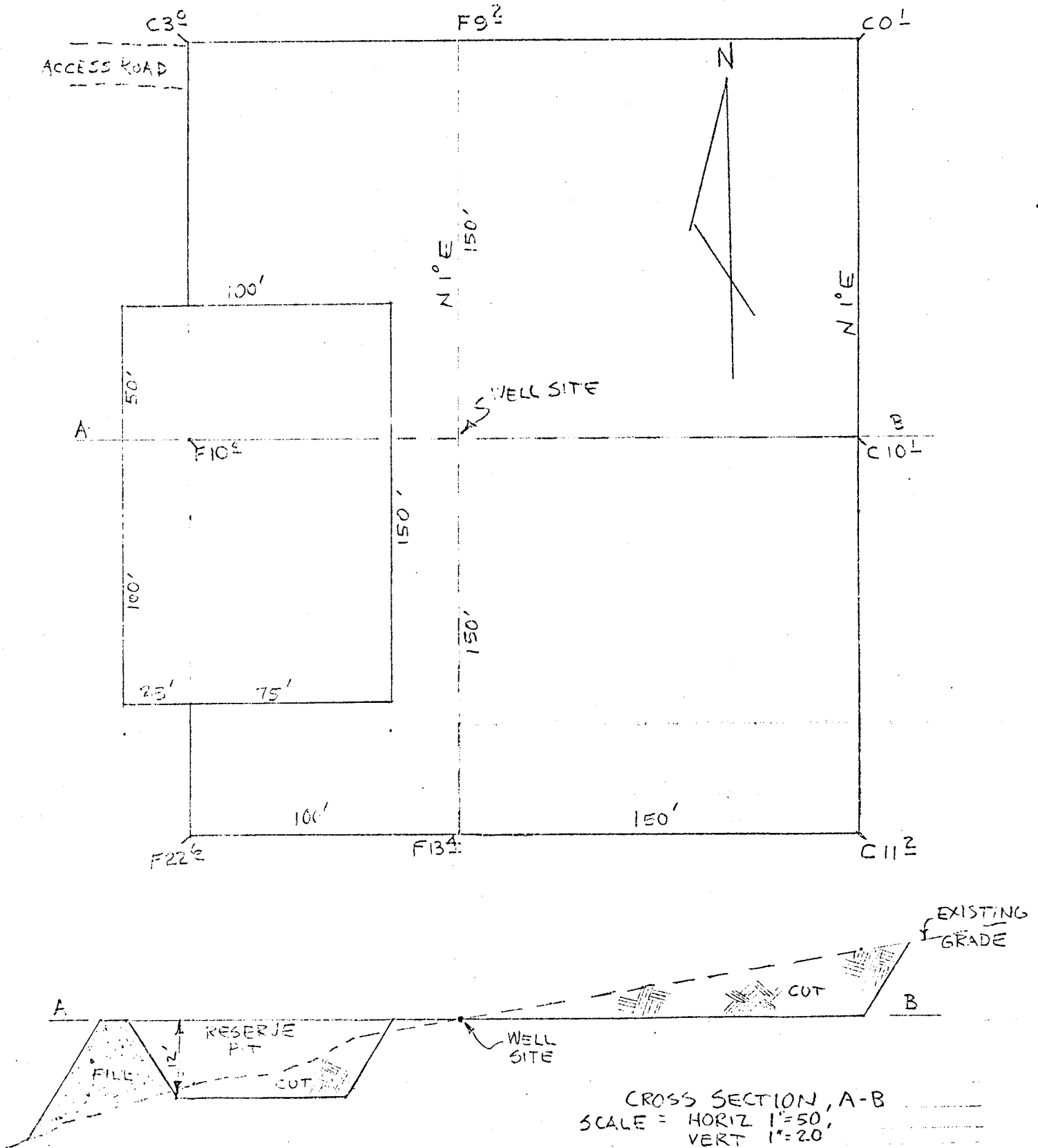
CSC ACREAGE



NATURAL RESOURCES  
ACREAGE

Cities Service Co's  
Federal "B" No. 1  
1980' FNL & 1980' FEL  
Section 15 - T.35S. - R.1E.  
Garfield County, Utah  
Lease #U-33916

GARFIELD COUNTY, UTAH



# Allen's ENGINEERING

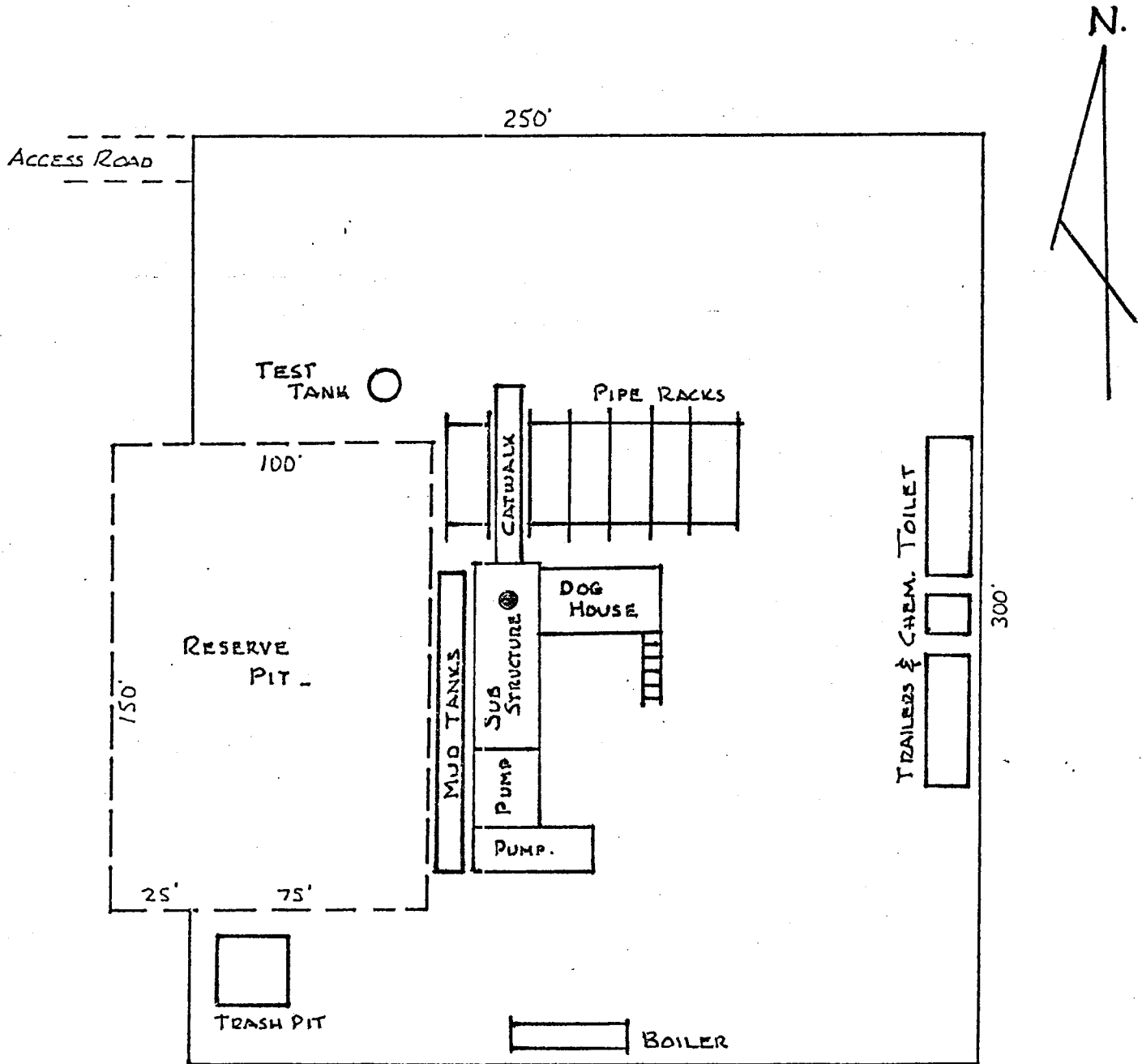
RICHFIELD, UTAH 84701

ALLEN K. NIELSEN, P.E. 3811

896-4391

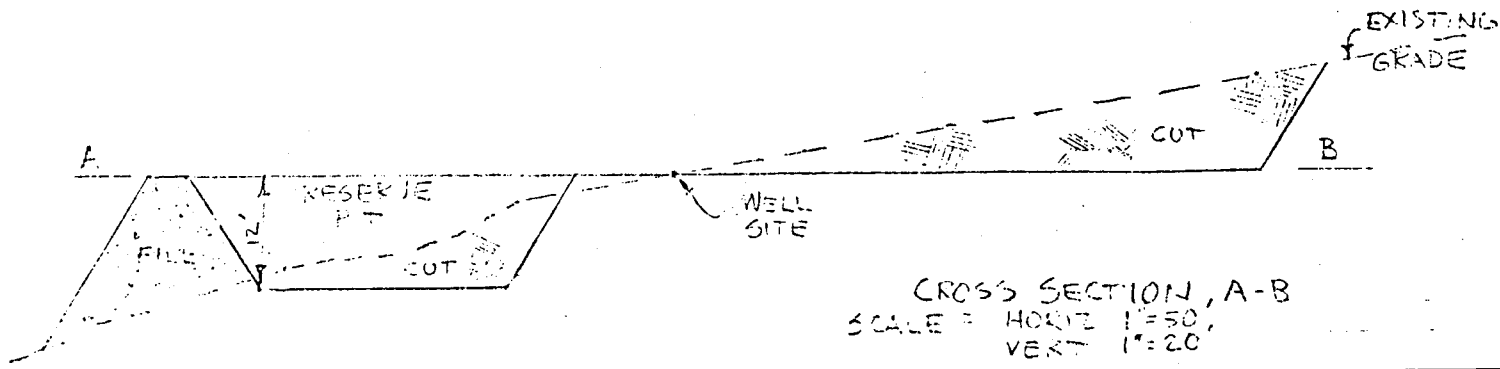
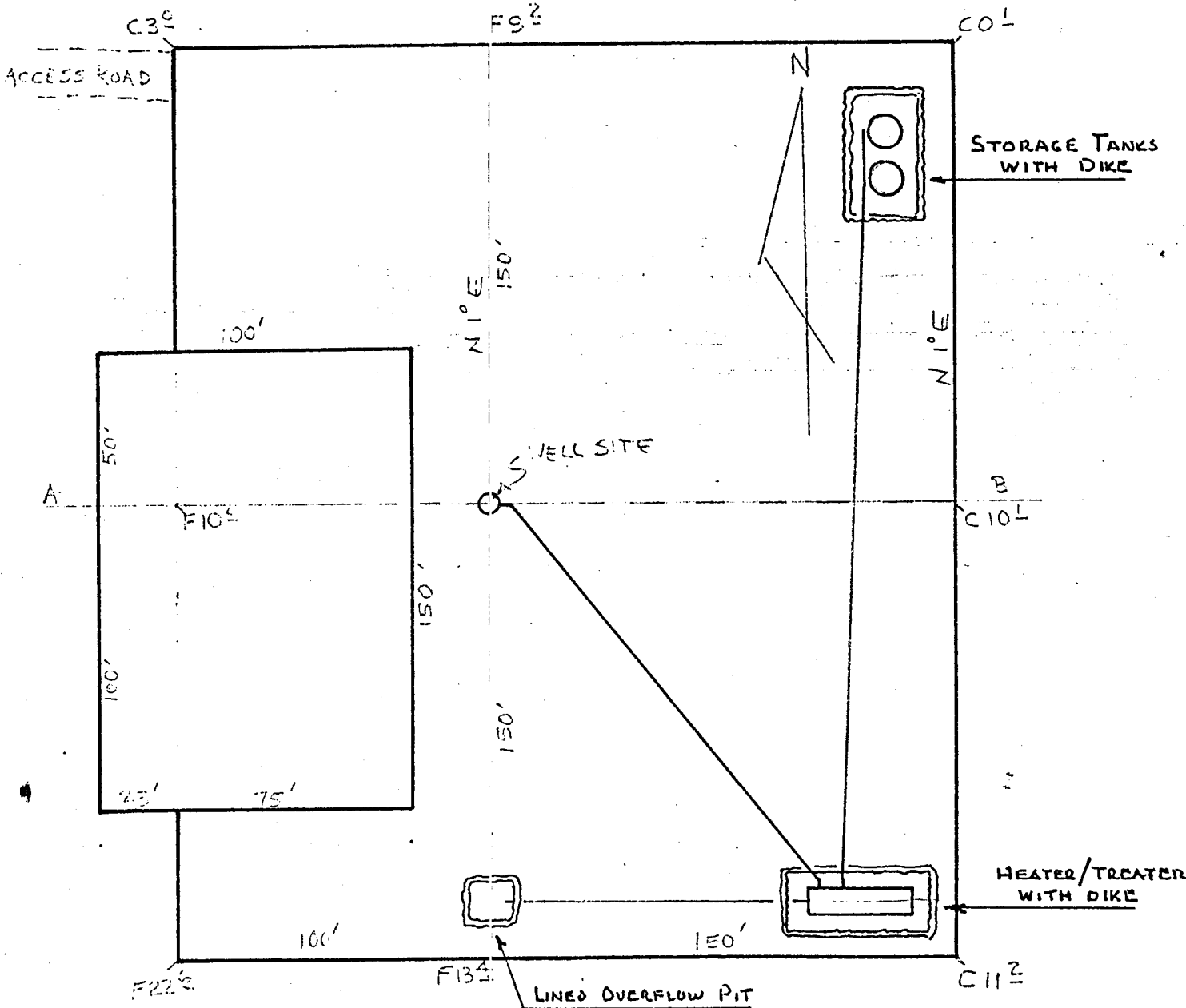
TITLE EXHIBIT "G"-Drill Pad Layout & Cross Section  
 PROJECT Location Federal B # 1.  
 OWNER Cities Service Company  
 LOCATION  $N\frac{1}{2}$  NE  $\frac{1}{4}$  Sec. 15 T 35 S. R 1 E. S. 1 E.

EXHIBIT "H"  
DRILL RIG LAYOUT



Cities Service Co's  
Federal "B" No. 1  
1980' FNL & 1980' FEL  
Section 15 - T.35S. - R.1E.  
Garfield County, Utah  
Lease #U-33916

# EXHIBIT "J" PRODUCTION FACILITIES LAYOUT



**Allen's ENGINEERING**

RICHFIELD, UTAH 84701

ALLEN K. NIELSEN, P.E. 3811

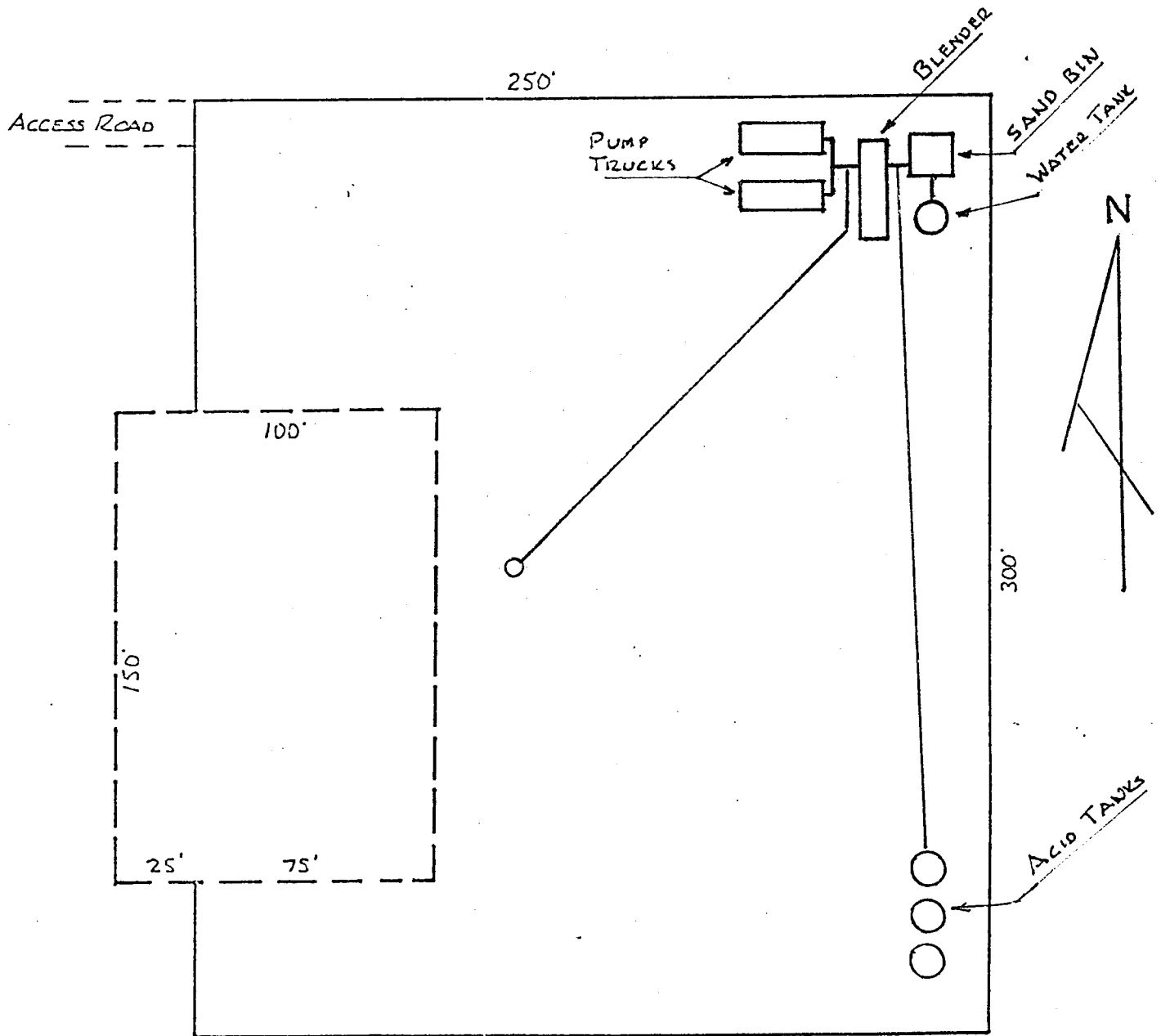
896-4391

TITLE EXHIBIT "J" - Drill Pad Layout & Cross Section  
 PROJECT Location Federal B # 1.  
 OWNER Citicorp Service Company  
 LOCATION Twp. 15 N. Sec. 15 E. R. 1 E. S. 15 E.



# EXHIBIT "K"

## FRACTURING PROGRAM LAYOUT



Cities Service Co's  
Federal "B" No. 1  
1980' FNL & 1980' FEL  
Section 15 - T.35S. - R.1E.  
Garfield County, Utah  
Lease #U-33916

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

Dixie NF  
Panguitch Engineers

EXHIBIT "AA"

REPLY TO: 2820 Leases and Permits  
7700 Transportation System

June 20, 1981

SUBJECT: City Services Well, Fed B #1

TO: Bill Sheehan, *Project Coordinator*  
~~I.D. Team Leader~~



Attached is my analysis of the proposed access route to the above mentioned drill site. Call if you have any questions.

*Joseph G. Black*  
JOSEPH G. BLACK  
Area Engineer

## AFFECTED ENVIRONMENT

City Services Federal "B" No. 1 drill site is located on top of a mountain saddle approximately 1/2 mile south of Main Canyon in the vicinity of Cherry Creek. The area immediately adjacent to the drill site is unroaded and will require the reconstruction of two miles of existing road and the construction of two miles of new road to access the site. At present, the site can be reached by travelling the Main Canyon Road (FH 17) to Cherry Creek and then following the old Cherry Creek Coal Mine Road for two miles to its terminus of the mine. This road is not listed as a system road. From the mine, the drill site can be reached by walking approximately two miles in a south easterly direction.

The Main Canyon Road varies in width from 14 to 20 feet and contains sections of surfaced (pit run aggregate) and unsurfaced roadway. The unsurfaced sections are slick when wet and dusty when dry. Present users of this road consist of recreationists, stockmen, loggers, and Forest workers. Travel speed is approximately 25 miles per hour.

The Cherry Creek Road was originally constructed as a coal haul route. The road has not been used for this purpose for approximately 15 years and has not been maintained for approximately the same period. The road is washed out at Birch Creek and is in need of reshape and finishing or reconstruction over its entire length. Portions of the road are constructed thru a gravelly type material which exhibits good trafficability. Other portions are thru a sandy clay material which becomes slick when wet and difficult to travel. Driving speed at present is approximately 5 miles per hour.

## Alternative "A" - Reject Proposal

Without the proposal, the area adjacent to the drill site will remain unroaded and unaffected from a transportation stand point. The existing Cherry Creek road may eventually be upgraded for coal removal purposes and the Main Canyon Road will probably be upgraded to accommodate future timber and mineral activities. Prior to this upgrading, both the Cherry Creek and Main Canyon Roads will continue to erode and dust at about their present rates.

## Alternative "B" - As proposed

The proposed route consists of two miles of existing road to the Cherry Creek Coal Mine, and two miles of new construction on to the drill site. The first two miles of existing road should be adequate for anticipated use with the following modifications:

1. Culverts need to be installed at locations shown on the attached map to handle runoff.
2. Intercepting dips should be constructed at designated locations.
3. Reshape and blading of the entire two miles will be necessary.
4. The existing berm along the road should be drifted across the road prism, leaving the fines, and then kicking the larger rocks back off of the roadway.
5. Spot clearing should be provided to increase site distance at designated locations.
6. The lower switchback curve, and the curve at the bottom of the grade at the coal mine, should be widened to increase the turning ratios.
7. The grade dropping into the coal mine should be reconstructed to provide adequate width.
8. Spot surfacing should be provided at designated locations. Depth of surfacing should not be less than 4 inches.
9. A permanent type crossing at Birch Creek would be quite expensive. The proposed 36" CMP may be expected to wash out during unusual high water. If the well proves to be a producer, the pipe should be removed and a permanent structure installed.
10. Some ditching will be needed to direct runoff and to generate material to cover rocky areas.

The section of new construction from the coal mine to the pad location will, for the most part be via self balanced sections. Portions of the road will require cutting through ridge tops and drifting material into the low spots on both sides of the ridges. Short pitches of up to 12% will be necessary. Some areas contain sideslopes of 50%+, and full benching will be necessary to prevent sliver fills and unnecessary raveling of material. Blasting is not anticipated. The parent material in the area consists of a sandstone ledgerrock and shale. The sandstone can be expected to powder out during dry weather and the shale will be slick when wet. Proper moisture content will be very important during the road construction in order to build a stable roadbed. The contractor should obtain permission to use water from Birch and Cherry Creek prior to starting construction. A minimum of 4" - 6" of surfacing material should be placed on the roadway to improve trafficability. Due to the grades associated with the proposed route, the surfacing material should contain sufficient binder to minimize washboarding and unraveling of material. Rounded river gravel will not hold to the road.

The lower half of the new alignment crosses some fairly dissected topography and proper drainage will be very important in this section. Culverts should be installed to handle runoff, and on all sections of the roadway where grades exceed 6%, ditches should be included in the roadway template. Proper location of drainage structures is essential and should be coordinated on the ground during construction.

A couple of areas show indications of slumping potential, and in these areas, cuts should be kept to a minimum. Filling over the areas should help to alleviate the slumping hazard.

Crossing of the Cherry Creek Coal Mine leased lands will be necessary if the proposed alignment is followed. Crossing of the leased lands should be coordinated with and agreed to by the coal permittee.

A road standard consisting of a 14 foot aggregate surfaced travel way with turnouts should be sufficient for anticipated needs. Two feet of sluff widening should be provided on all fill slopes greater than 5 feet in height. Cut and fill slopes will require some slope variation. In rock cuts etc., cut slopes should be left on 1/4 to 1/2:1 slopes. In less rocky areas where material and sideslopes will permit, the cut-slope should be flattened out to 1 1/2 or 2:1 slopes to allow revegetation. Fill slopes should be placed on a minimum of 1 1/2:1 slope, or flatter where cross slope allows. (See attached typical sections.)

Turnouts should be provided at designated locations along the route to provide adequate site distance and safe passing of vehicles.

If this drill site becomes a producing well, power and water will be necessary at the site. A transmission line for the oil and/or gas may also be necessary. To minimize impacts to the area, all of these facilities should be placed in one travel corridor along with the road. However, the traveled way of the road should remain free of all pipelines, etc. By placing these facilities in the road right of way, but out of the traveled way of the road, and providing adequate burial depth, future conflicts in road reconstruction, etc. will be lessened.

A possible borrow and/or surface stabilization material site exists just west of the Cherry Creek road prior to its dropping off into Cherry Creek. The material appears to consist mostly of a gravelly shale. No testing for quantity or quality has been done at this time. Prior to use, a field investigation should be completed. (See attached map for approximate location.)

Preliminary Corrugated Metal Pipe List

(Estimated Quantities Only)

1.	36" x 40'	Birch Creek Crossing
2.	24" x 40'	Dry Drainage
3.	24" x 80'	Lower Switchback
4.	18" x 40'	Dry Drainage
5.	36" x 60'	Cherry Creek Crossing
6.	24" x 40'	Dry Drainage
7.	18" x 40'	Dry Drainage
8.	24" x 40'	Dry Drainage
9.	24" x 40'	Dry Drainage
10.	18" x 40'	Dry Drainage
11.	18" x 40'	Dry Drainage
12.	24" x 40'	Dry Drainage
13.	18" x 40'	Dry Drainage
14.	24" x 40'	Dry Drainage
15.	24" x 40'	Dry Drainage
16.	36" x <del>40</del> 60'	Dry Drainage
17.	24" x 60'	Dry Drainage
18.	24" x 60'	Dry Drainage
19.	24" x 60'	Dry Drainage
20.	18" x 60'	Dry Drainage
21.	18" x 60'	Dry Drainage
22.	18" x 40'	Dry Drainage
23.	18" x 40'	Dry Drainage
24.	18" x 40'	Dry Drainage
25.	18" x 40'	Dry Drainage

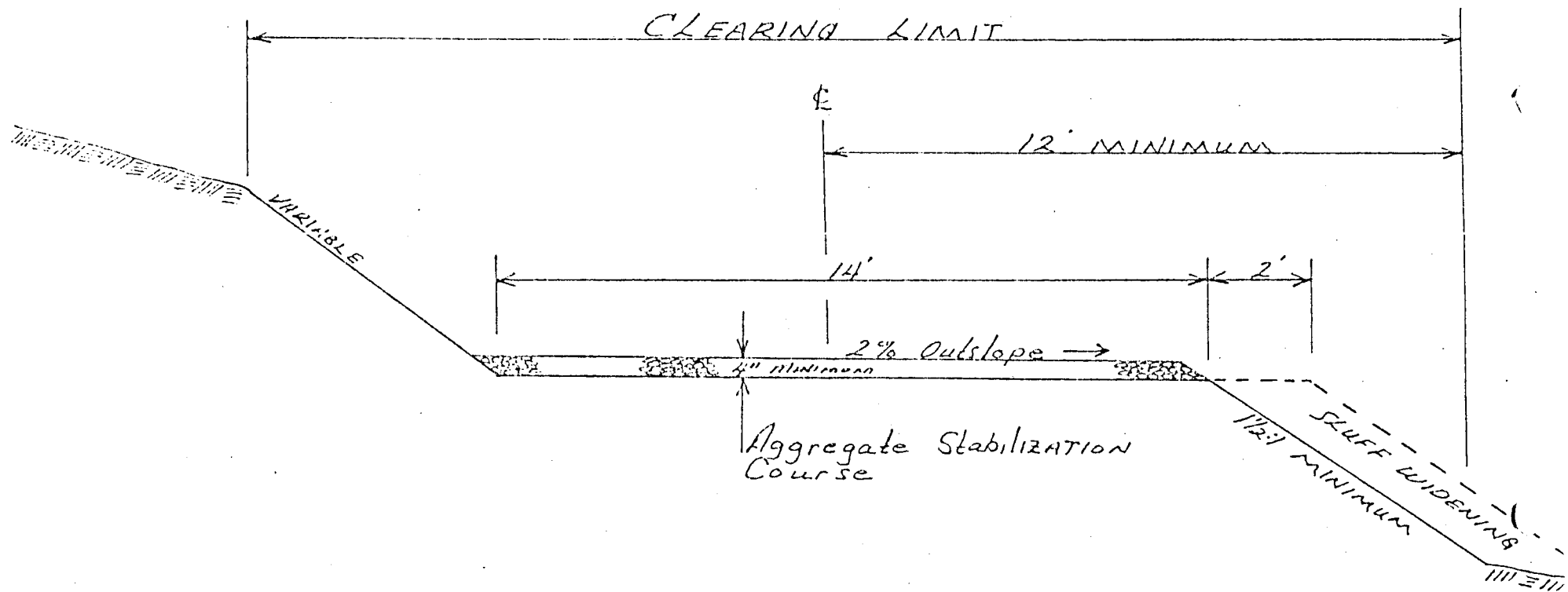
#### Issues and Concerns

- 1) Special emphasis should be placed on the sections of roadway that have grades in excess of 8%. Native materials are very erodable and drainage facilities must be carefully considered.
- 2) Road construction should be inspected to insure proper compaction of materials, placement of pipe, road width, etc.

Mitigating Requirements

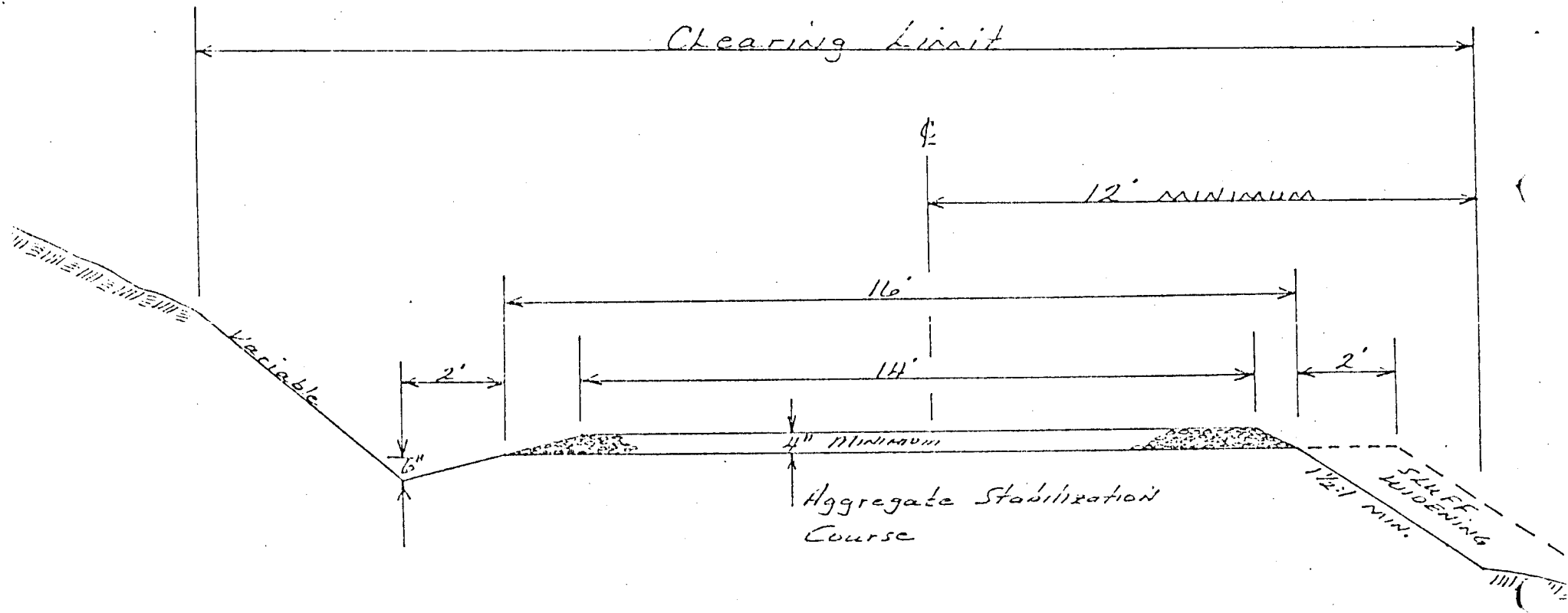
- 1) Culverts and ditch sections to control and direct runoff and lessen erosion impacts.
- 2) Surfacing to improve traction, safety, and erosion hazards.
- 3) All fill and cut slopes flat enough to revegetate should be seeded to prevent erosion with a mixture designated by the Forest Service. Seeding should be completed before the ground surfaces to be seeded crust over.
- 4) Road construction shall be according to "Forest Service Standard Specifications for Construction of Roads and Bridges" 1979 Edition.





TYPICAL OUTSLOPED SECTION

Curve Widening =  $400/R$   
 Stuff Widening = 2' For Fills > 5'.....  
 Outslope 2%.



TYPICAL DITCHED SECTION

CURVE Widening =  $400/R$   
 STUFF Widening = 2' For Fills  $> 5'$



United States  
Department of  
Agriculture

Forest  
Service Dixie N.F.

EXHIBIT "BB"

Re: 2720 Special Use Permits  
2820 Mineral Leases & Permits

Date June 19, 1981

Subject: Cities Service Federal B #2 Oil Well Drilling,  
Access Road and Site Location (Proposed)

To: District Ranger, Escalante R.D.

Enclosed is the special uses and minerals report for the above project,  
prepared by Forester William Sheehan.

*Ralph S. Rawlinson*  
RALPH S. RAWLINSON  
Lands Staff Officer

Enclosure

cc: Sheehan

RECEIVED ESCALANTE R.D.		
JUN 24 81		
Action	To	Info
<input type="checkbox"/> Range		<input checked="" type="checkbox"/> FC
<input type="checkbox"/> Range Com		<input checked="" type="checkbox"/> JLV
<input type="checkbox"/> Forester		
<input type="checkbox"/> Dist. Mgt. Asst.		
<input type="checkbox"/> Tech.		
<input type="checkbox"/> Admin.		
<input type="checkbox"/> Fire & Rec.		
<input type="checkbox"/> Minerals		
<input type="checkbox"/> Silv.		
<input type="checkbox"/>		
<input type="checkbox"/>		



F.S. SPECIAL USES & MINERALS REPORT  
FOR  
CITIES SERVICE FED. B#2 OIL WELL PROJECT  
ACCESS ROAD AND SITE LOCATION

THE AFFECTED ENVIRONMENT

Special Uses

There are no existing permitted special uses within the affected area.

Minerals

The proposed oil well site would be located over significant deposits of commercially important coal. There is a high possibility oil could be discovered, the well being drilled into the Upper Valley Anticline--an oil producer since 1964.

There are no known minerals locatable under the U.S. Mining Laws of commercial importance.

EFFECTS OF IMPLEMENTATION

Special Uses

Status quo...no effect one way or the other.

Minerals

Same.

Alternative No. 2 (Approve proposal)

Special Uses

The Cities Service proposal involves improvement of the existing road from Main Canyon Forest Highway to the Cherry Creek Coal Mine, and construction of new road from that mine to the planned oil well site. The portion of the road located between the Main Canyon Highway and the perimeter of the activated oil lease would be covered by Forest Service Special Use permit administered by the Forest Service. The remaining part of the access road within the perimeter of the activated oil lease, and the oil well site itself, would become part of the "area of operations" administered by the U.S.G.S. If a gravel source is required on National Forest land, it would also need to be under Forest Service permit. The U.S.G.S./F.S. Memorandum of Understanding covering oil and gas operations, applies to this project.

Minerals

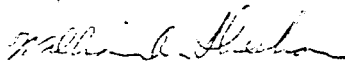
The access road, as proposed, not only would serve the Cities Service oil well drilling project, but it would make the Cherry Creek Coal Mine more easily accessible. That portion of the road from the mine to the oil well-site would be constructed parallel to coal bearing strata for a good part of the way. The coal is relatively high in BTU's, low in sulfur, low in ash content, and is considered to be of good quality. The Cherry Creek Mine tapped a 15-foot thick seam in the Upper Alvey Zone and operated from 1962-1964. It served a local market. Rising petroleum prices may again create a local market and the ready accessibility of the Cherry Creek coal would make it attractive.

A Mr. George H. Frandsen owns the coal in the SE $\frac{1}{4}$  SE $\frac{1}{4}$  Section 8, T. 35 S., R. 1 E., SLM, a 40-acre tract, under Federal Lease #SL-050638. This includes the Cherry Creek Mine. He should be informed of the Cities Service proposed road work.

There should be no complications created by the oil rig drilling through the coal.

MITIGATING REQUIREMENTS

1. Issue a Forest Service Special Use Permit for the access road.
2. Issue a Forest Service Mineral Materials Permit for the gravel source, if on National Forest land.
3. Coordinate with George H. Frandsen.
4. Adhere to terms of U.S.G.S./F.S. Memorandum of Understanding covering oil and gas operations.



WILLIAM A. SHEEHAN  
Minerals Forester

SOIL REPORT FOR  
CITY SERVICES COMPANY EXPLORATION PROGRAM  
CHERRY CREEK PROPOSED WELL LOCATION

On June 9, 1981, I participated as an ID Team member on an on-site review of the proposed road location and well site in the Cherry Creek area on the Escalante Ranger District. Following are comments to be used in preparing the EA:

AFFECTED ENVIRONMENT (Soils and Geology)

The proposed road is located on the Straight Cliffs geologic formation. This formation consists of massive sandstone with associated beds of conglomerate, shale, and limestone.

Topography consists of gently sloping benchlands and associated steep sideslopes. On the steep sideslope on the east side of Cherry Creek, the proposed road location crosses the lower portion of a slump area. This slump area appears to be active during wet years. At present time, there is little movement and the seep area is dry.

ALTERNATIVES

Four alternatives were identified. Two were discarded because of infeasible access. The remaining two alternatives are: (1) No change and (2) City Services proposal.

EFFECTS OF IMPLEMENTATION

Alternative 1 - No Change

With this alternative, erosion rates would continue at present levels (moderate to moderately high erosion from steeper slopes and moderately low erosion rates from bench areas). The active slump would continue to move slowly during moist years.

Alternative 2 - City Services Proposal

Road construction would temporarily increase the amount of erosion; however, the increase is not expected to have a significant adverse impact. Due to the amount of interbedded clay shales in the Straight Cliffs formation, surfacing will be necessary for all-weather access. A significant road cut through the base of the slump area will activate mass movement, particularly during wet years.

MITIGATING REQUIREMENTS

1. In constructing the road in the slump areas, keep the cut to a minimum. If possible, use fill material to cross this area.
2. Ensure that all erosion control measures are taken to protect the road surface and well site area. (This includes culverts, rolling dips, and seeding of cut and fill slopes and disturbed areas.)

There was some discussion on utilizing sources of "burnt shale" for road surfacing. The sites shown to me as possible sources did not appear to be sufficient in volume. They appeared to be "float" rock with too much soil material to be suitable. The rock material itself should be suitable for use if sufficient volumes are located. From a soil resource standpoint, I see no problems in allowing the contractor to utilize any source areas he may locate.

*James T. Bayer*

JAMES T. BAYER  
Soil Scientist

RECEIVED ESCALANTE R.D.		
JUL 2, 81		
Action	To	into
	Ranger	RD
	Ranger Can	
	Forests	
	Bus. Mgt. Ass't	
	Pres.	
	Admin	
	Fire & Rec	
	Minerals	
	Silvi	

RECEIVED  
ESCALANTE R.D.

Action	To	Info
	Dinner	
	Rental Car	
	Cashier	
	Sales Mkt Asst	
	Truck	
	Mileage	
	Fuel & Oil	
	Tire & Rep	
	Other	
	Total	

LDD/lid  
cc. Lincoln Lyman



2. Archaeological Site Survey  
City Services Well FED. B #1
3. Author and surveyor: Larry Davis
4. T 35S R 1E, Portions of Section 4, 9, 15, 16

5. A new road is to be constructed from the Cherry Creek coal mine and is to run east and a little bit south for a distance of approximately two miles to the above-mentioned drill pad site. Any activities such as those necessary for this project will cause a certain impact on any archaeological sites that may be present. This impact may be direct by destroying or damaging them through construction activity or it may lead to indirect damage by causing these resources to be made more accessible to the public and therefore more liable to vandalism.

- |                   |                      |
|-------------------|----------------------|
| 6. Forest - Dixie | District - Escalante |
| County - Garfield | State - Utah         |

7. and 8. A survey on foot was conducted on June 8, 1981, by myself, Rodney Snedeker, Forest Service archaeologist, Lincoln Lyman, road construction contractor, Millard Dumas and a number of other gentlemen representing the Forest Service. My concern was with observing and recording any archaeological resources.

The route from the Cherry Creek mine to the drill pad site had already been flagged. The route passes through a variety of vegetation and covers a distance of approximately two miles. In the beginning, there is a great deal of oak brush and fir. After climbing out of Cherry Creek, we entered into a pinyon-juniper forest with the various other forms of vegetation that is found in it. This includes sagebrush, rabbitbrush, bitterbrush, cliff-rose, buffaloberry, and various smaller grasses and shrubs.

No cultural material was observed until site #1 was found (see map). This is a small lithic scatter with evidence of a fire hearth. Although no stone alignment or other features were found, an area of charcoal-bearing soil roughly two meters in diameter was observed. This appears to have been a limited or seasonal use area. Two possible worked stone artifacts (scraper, knife?) were observed. Chips and flakes of stone (waste flakes) were also evident at the site. No artifacts or other materials were collected. The site appears to be only a shallow surface site, although no testing was conducted to establish actual depth.

In consultation with Millard Dumas and Rodney Snedeker, it was decided that, because the proposed road would pass through this site, the road would be re-routed to the north. The flagging was changed to new locations for the benefit of the construction crew after it was determined that no new cultural remains were evident.

Another site (#2) was reported to us by Lincoln Lyman and is located on an alternate route of the road (see map). It was decided that this route would not be used, so the site was not visited. It is said to be also a seasonal or limited use site much like site #1, but covering a larger area.

12. As an archaeologist, I assume each and every site is significant. Only through total excavation can the full extent of significance be determined.

The area in question was occupied by peoples from the Fremont culture probably during the period from A.D. 1050-1200. It could have also been utilized by Shoshonean groups such as the Paiute after this time. Little professional work has been done in the Escalante area north and west. All remaining sites then take on an added significance and every effort should be made to preserve them, at least until such time as they can be thoroughly investigated.

13. It is my opinion that the proposed road can be constructed without damage to the two mentioned archaeological sites. This is providing that the small re-routing change is made to cause the road to go north of site #1.

The construction contractor has a good reputation of working with all the parties concerned to construct a good road with a minimum of damage. He is aware of the sites in question and I feel confident that the road can be constructed without damaging them.

Site No. \_\_\_\_\_

CULTURAL RESOURCE MANAGEMENT  
SITE INVENTORY FORM

2360 A

## IDENTIFICATION

Site No. \_\_\_\_\_ Project No. \_\_\_\_\_  
Project Name City Services Well Fed. B #1  
Recorded By Larry Davis  
Date of Survey June 8, 1981 State No. \_\_\_\_\_

## MANAGEMENT DATA

Site Type: Historic ☐ Prehistoric ☒  
National Register Status: Eligible ☐ Not Eligible ☒  
Unevaluated ☐ On Register ☐  
Evaluated By Larry Davis  
Site Condition Some natural erosion. Trees and other vegetation growing on the site.  
% Destroyed 20 % ?  
Agent Causing Impact: Nature ☒ Vandalism ☐  
Project ☐ On-going Use ☐  
Management Potential: Interpretation ☐ Scientific ☒  
Preservation Action Recommended: Record ☐ Collect & Record ☒  
Avoid ☒ Salvage ☐ Sign ☐ None ☐ Other ☐  
Artifacts Collected? Yes ☐ No ☒  
Disposition: FS CREC ☐ Other ☐  
Site Map: Yes ☐ No ☒  
Photos Taken: Color ☐ B/W ☐ Where on file? \_\_\_\_\_

## LOCATION

Forest Dixie District Escalante  
State Utah County Garfield  
UTM Grid: Zone ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ E, ☐ ☐ ☐ ☐ ☐ ☐ N  
Township 35 S Range 1 E Section 16 NE 1/4, NE 1/4, 1/4  
Meridian S.L.B.M. Map Name and Scale Griffin Point 4" to mi.

Site No. \_\_\_\_\_

## CULTURAL RESOURCE MANAGEMENT

2360 B

## SITE ATTRIBUTES

Prehistoric

## SITE DESCRIPTION

Site Type: Limited Activity ☒ Habitation \_\_\_\_\_Characteristics: Lithic Scatter ☒ Ceramic Scatter \_\_\_\_\_ Rock Art \_\_\_\_\_Hearth Area ☒ Rock Alignments \_\_\_\_\_ Masonry Units \_\_\_\_\_ Burial \_\_\_\_\_

House Depressions \_\_\_\_\_ Jacal/Adobe \_\_\_\_\_ Hunting Blinds \_\_\_\_\_

Classification: Anasazi \_\_\_\_\_ Fremont/Sevier ☒ ? Shoshoni \_\_\_\_\_

Archaic \_\_\_\_\_ Paleoindian \_\_\_\_\_ Unknown \_\_\_\_\_ Other \_\_\_\_\_

Age of Site: 750-900 BP 1050-1200 ~~BC~~/AD ?Based on: Guess ☒ Projectiles \_\_\_\_\_ Ceramics \_\_\_\_\_ C14 \_\_\_\_\_

Tree-rings \_\_\_\_\_ Architecture \_\_\_\_\_ Obsidian Hydration \_\_\_\_\_ Other \_\_\_\_\_

Dimensions of Site: Length 50 M ft. Width 30 M ft. Depth ? M ft.

Directions of long axis (circle one): N E NE NW  
S W SW SEArtifacts Observed: Lithic ☒ Ceramic \_\_\_\_\_ Bone \_\_\_\_\_ Wood \_\_\_\_\_ Shell \_\_\_\_\_

Other \_\_\_\_\_

Kinds of Artifacts: Lithic flakes, chipped stone (scraper, knife ?)

Artifact Density: 200 per site  
(items) (area)

## - ENVIRONMENTAL DESCRIPTION

Vegetation on Site Pinyon-Juniper, small shrubsVegetation around Site SameGround visibility on Site 90 %

## Topographic Situation:

Bench    Terrace    Valley Bottom   Hill side    Mesa top    Saddle xRidge top    Talus slope    Alluvial fan   Ledge    Alcove/shelter    Overhang   Lake shore    Sand bar   Ground slope   ° Aspect/Exposure: N, E, S, W, NE, SE, SW NW, Flat

## Relation to Water:

Type of Water Stream x Spring   Seep    Lake   Name Cherry CreekDistance 1 Km. Direction: North-northwestElevation of Site 7320 ft.

Remarks:

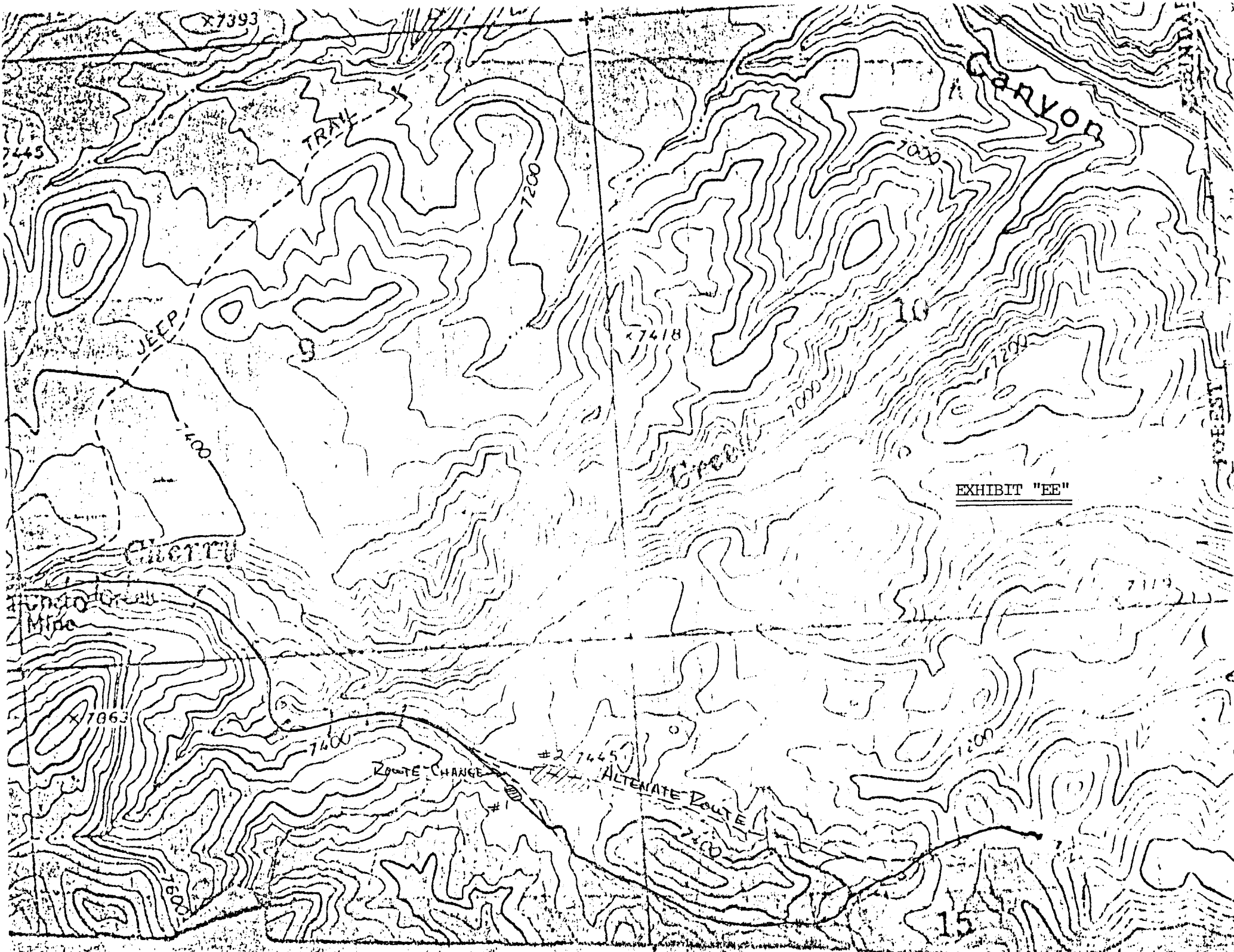


EXHIBIT "EE"

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-33916	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR CITIES SERVICE COMPANY		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P. O. Box 1919 Midland, Texas 79702		8. FARM OR LEASE NAME Federal B	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1980' FNL & 1979 FEL of Sec. 15-T35S-R1E, Garfield County Utah At proposed prod. zone Same as above		9. WELL NO. 1	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approx. 11 miles west of Escalante, Utah		10. FIELD AND POOL, OR WILDCAT Wildcat	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 660'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 15-T35S-R1E	
16. NO. OF ACRES IN LEASE 2219.14		12. COUNTY OR PARISH Garfield	
17. NO. OF ACRES ASSIGNED TO THIS WELL 80		13. STATE Utah	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. N/A		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7253.4' GR		22. APPROX. DATE WORK WILL START* After Permit Approval	

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	94#	40'	3 yds. Redimix
17-1/2"	10-3/4"	40.5 & 45.5#	3000'	2750 sacks
9-1/2"	7-5/8"	26.4#	7200'	850 sacks
6-1/2"	5-1/2" liner	17#	6900-10,195'	200 sacks

It is proposed to drill this well to a depth of 10,195' to test the Redwall Formation.  
The blowout prevention program is as follows:

1. one set of blind rams
2. one set of drill pipe rams
3. one Hydril
4. one rotating head.

The acreage allocated to this well is not dedicated to any gas purchaser.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

24. SIGNED E. P. Miller TITLE Reg. Oper. Mgr.-Prod. DATE 7-14-81

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
(Orig. Sgd.) A. M. RAFFOUL FOR E. W. GUYNN  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DISTRICT OIL & GAS SUPERVISOR  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_ DATE AUG 20 1981

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED  
TO OPERATOR'S COPY

FLARING OR VENTING OF  
GAS IS SUBJECT TO NTL 4-A  
DATED 1/1/80

State O & G. Production Facilities and Flowline NOT Approved

**\*\* FILE NOTATIONS \*\***

DATE: Nov. 2, 1981

OPERATOR: Cities Service Co.

WELL NO: Federal B #1

Location: Sec. 15 T. 35S R. 1E County: Garfield

File Prepared: ☒

Entered on N.I.D: ☒

Card Indexed: ☒

Completion Sheet: ☒

API Number 43-017-30111

CHECKED BY:

Petroleum Engineer: \_\_\_\_\_

Director: OK as rule C-3

Administrative Aide: OK as per Rule C-3,

APPROVAL LETTER:

Bond Required: ☐

Survey Plat Required: ☐

Order No. \_\_\_\_\_

O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site ☐

Lease Designation ☒

Plotted on Map ☐

Approval Letter Written ☐

Hot Line ☐

P.I. ☒



November 13, 1981

Cities Services Company  
P. O. Box 1919  
Midland, Texas 79702

RE; Well No. Federal # "B" #1,  
Sec. 15m T. 35S, R. 1E,  
Garfield County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer  
Office: 533-5771  
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-017-30111.

Sincerely,

DIVISION OF OIL, GAS AND MINING

Cleon B. Feight  
Director

CBF/db  
CC: USGS

Oil and Gas Operations  
2000 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

September 21, 1982

Cities Service Company  
P.O. Box 1919  
Midland, Texas 79702

Re: Rescind Application for Permit  
to Drill  
Well No. 1  
Section 15-T35S-R1E ✓  
Garfield County, Utah  
Lease No. U-33916

Gentlemen:

The Application for Permit to Drill the referenced well was approved on August 20, 1981. Since that date no known activity has transpired at the approved location. Under current District policy, applications for permit to drill are effective for a period of one year. In view of the foregoing this office is rescinding the approval of the referenced application without prejudice. If you intend to drill at this location at a future date, a new application for permit to drill must be submitted.

This office requires a letter confirming that no surface disturbance has been made for this drill site. Any surface disturbance associated with the approved location of this well is to be rehabilitated. A schedule for this rehabilitation must then be submitted to this office. Your cooperation in this matter is appreciated.

Sincerely,

E. W. Gynn  
District Oil & Gas Supervisor

bcc: SMA  
State O&G ✓  
State BLM  
MMS-Vernal  
Well File  
APD Control

DH/dh



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

Scott M. Matneson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

September 29, 1982

Cities Service Company  
P. O. Box 1919  
Midland, Texas 79702

RE: Well No. 1  
Sec. 15, T. 35S, R. 1E  
Garfield County, Utah

Gentlemen:

Approval for Application for Permit to Drill the above referenced well is rescinded as of the above date in concert with action taken by Minerals Management Service.

If you intend to drill at this location at a future date, a new application for permit to drill may be submitted for State approval.

Sincerely,

Norm Stout  
Administrative Assistant

NS/as